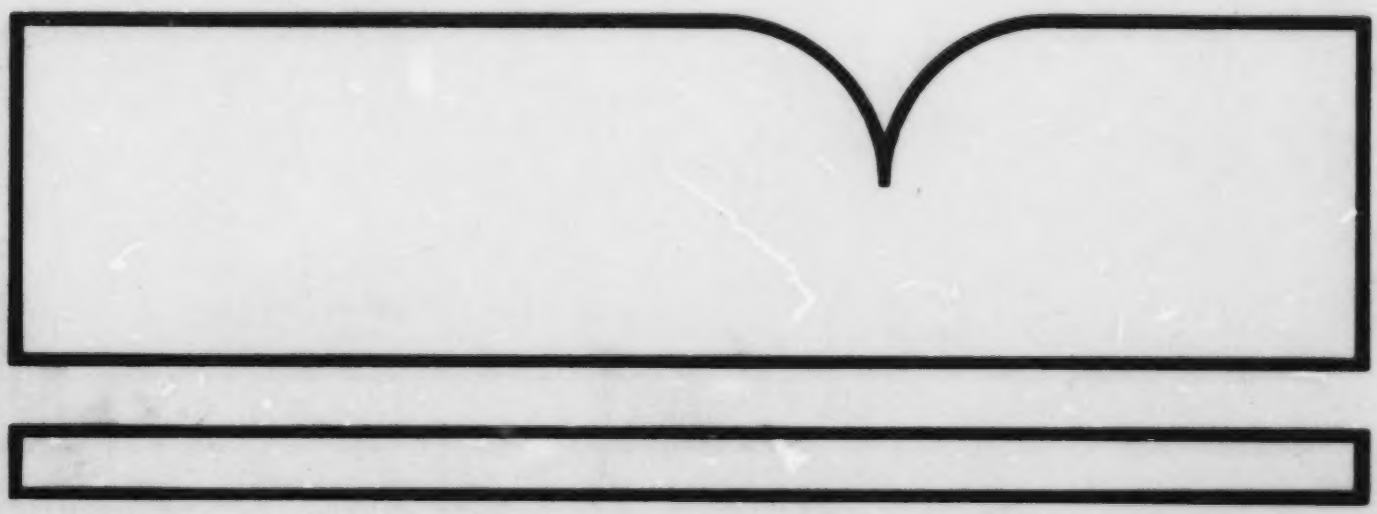
PB81-203580

EPA I/M Model Program Guidelines
Request for Contract Proposal (RFP)

(U.S.) Environmental Protection Agency
Ann Arbor, MI

Nov 80



U.S. Department of Commerce
National Technical Information Service
NTIS.

PB81-203580

EPA-AA-IMS-80-7

TECHNICAL REPORT
NOVEMBER 1980

EPA I/M MODEL PROGRAM GUIDELINES
REQUEST FOR CONTRACT PROPOSAL (RFP)

PRODUCT OF:
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-AA-IMS-80-7	2.	3. RECIPIENT'S ACCESSION NO. PB81 203580
4. TITLE AND SUBTITLE EPA I/M Model Program Guidelines Request for Contract Proposal (RFP)		5. REPORT DATE November 1980 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) William B. Clemmens, David Brzezinski, Becky Waring, And Fred Iacobelli		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Environmental Protection Agency Office of Mobile Source Air Pollution Control Inspection and Maintenance Staff Ann Arbor, MI 48105		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS		13. TYPE OF REPORT AND PERIOD COVERED Technical 14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

After legislative authority to implement an I/M program has been passed by the State Legislature, those administrators responsible for the program are faced with the "how to do it" aspects of implementation. One immediate concern is the decision on the type of program to be implemented--centralized or decentralized. If a centralized program is selected, the Administrator must deal with the task of developing a network of inspection facilities. The development of the inspection networks as well as the operation of inspection facilities is often performed by the private sector under contract to the state. For those states choosing to use the contractor approach for either construction or operation, the state has the responsibility to develop a document specifying the services that the state wants.

This document is generally called an RFP (Request for Proposal) and contains the detailed specifications required. The question is "How much detail?" and "What services?" should be included in the state RFP. To provide guidance or appropriate suggestions to these questions, the EPA staff has developed the attached "Model RFP".

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Inspection Maintenance Contracts Contractors	Inspection/Maintenance	

18. DISTRIBUTION STATEMENT RELEASE UNLIMITED	19. SECURITY CLASS *(This Report)* UNCLASSIFIED	21. NO. OF PAGES 86
	20. SECURITY CLASS *(This page)* UNCLASSIFIED	22. PRICE

EPA Form 2220-1 (9-73)

EPA-AA-IMS-80-7

Technical Report
November 1980

EPA I/M Model Program Guidelines
Request for Contract Proposal (RFP)

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I. Forward

After legislative authority to implement an I/M program has been passed by the State Legislature, those Administrators responsible for the program are faced with the "how to do it" aspects of implementation. One immediate concern is the decision on the type of program to be implemented -- centralized or decentralized. If a centralized program is selected, the Administrator must deal with the task of developing a network of inspection facilities. The development of the inspection networks as well as the operation of inspection facilities is often performed by the private sector under contract to the State. For those states choosing to use the contractor approach for either construction or operation, the State has the responsibility to develop a document specifying the services that the State wants.

This document is generally called an RFP (Request for Proposal) and contains the detailed specifications required. The question is "How much detail?" and "what services?" should be included in the State RFP.

To provide guidance or appropriate suggestions to these questions, the EPA staff has developed the attached "Model RFP". The model RFP was developed as a general guideline for any state implementing a centralized I/M program, and is based on the assumption that many of the basic inspection operations are common between the various states. But just as many functions or specifications may be common between states, each state may have unique circumstances that require different treatment of certain subject areas. Therefore, the "Model RFP" is not presented as a "cross out our name and insert your name" document, each state should carefully consider the appropriateness of each specification to their situation, and as necessary add or delete the necessary items.

Another issue is the relationship of the "model RFP" to the EPA policy on minimum requirements. Obviously, the I/M Staff has made an effort to insure the model RFP is consistant with current EPA policy. The model RFP in many cases, however, provides specifications and requirements that may be more inclusive than any EPA requirements. The reasons for the more detailed specifications are that (1) the staff feels that "good engineering judgment" would require these details to insure that in the long-run the job was performed correctly and in a cost effective manner, (2) the I/M Staff feels that many items would be performed by the contractor as a necessity of operating the program, and the additional information would allow more contractors to understand and bid on the RFP as well as provide the state a more consistant manner with which to evaluate the bidders response, and (3) the I/M Staff wished to provide technical information to the State Administrators that would allow them to make an informed decision if they wished to delete an item rather than omit an item because someone had not thought of it or evaluated its usefulness.

As encompassing as the Model RFP may appear, it does not cover all possible program options. New and more efficient techniques may be developed with continued dialog. Therefore, the I/M Staff suggests that the states use this document for guidance in the development of their own document taking into consideration the state's (or county's, city's) unique needs. The I/M Staff at EPA's Ann Arbor facility is available to discuss the State's document and to provide additional assistance or information as necessary. You may contact Tom Cackette, Donald White, or Bill Clemmens at (313)668-4367.

II. Descriptive Outline of Model RFP

A. Section I - Introduction

The introduction summarizes the background and purpose of the program, the expected contents of proposals, and the bases for proposal evaluation. It cites the statutory authority for the program, names the agency responsible for its implementation and administration, and provides instructions for the submission of proposals. It also describes the expected time period of the contract, the geographic area and population to be covered, and the method of payments of the contractor. Forthcoming bidders' conferences are also announced here.

B. Section II - Abbreviations and Definitions

Section 2 is straightforward. It contains abbreviations and definitions of terms used in the other sections of the RFP. Statutory or technical language and other usages differing from normal usage should be clarified in this section.

C. Section III - Program Information

This section summarizes the statutory authority for the program and presents any pertinent technical reports or documents available to bidders for review. If investigation of another jurisdiction's centralized program would informationally benefit bidders, it should be referred to here, as well as any regulations or administrative procedures governing the program. The model RFP section presents a fictitious list of documents a state typically produces in the process of formulating its I/M program plan, and the individual state's equivalent of these should be made available to bidders. More extensive background information may be brought to bidder's attention at a bidder's conference.

D. Section IV - Contract Requirements

This section includes the scope of work and the program schedule, outlining what is expected in a contractor's bid and performance in terms of methods and resources. If a bidder should address program options under consideration, such as convertibility from idle to loaded mode testing, this section should raise those options.

E. Section 5 - Equipment Specifications

This Equipment Specifications provide to the bidder specific requriements and guidelines relating to the test facilities (design, land use, environmental impact, construction, etc.), and the testing equipment. The equipment specifications also provide general requirements on the functional utilization of location of the facilities within the required facility network.

F. Section VI - Operating Requirements

The Operating Requirements defines all operations or functions which are the contractor's responsibility. The requirements provide for tasks involved in operating the facilities, following the required administrative procedures, inspecting vehicles, providing the proper reports, and and effectively utilizing a QA/QC program. Pre-acceptance requirements are also included.

G. Section VII - Administrative Conditions

This section defines the distribution of administrative responsibilities between the contractor and the state. It includes the conditions under which the program is to be conducted and provisions to protect the state in case disputes or difficulties with the contractor should arise. These latter provisions in particular should be written with legal assistance.

Administrative matters to be resolved in this section include the method of collection of fees and reimbursement of the contractor, what rights the state has to replace or expropriate the contractor, and who is to manage public information activities. Other more standard contract provisions cover the areas of auditing, indemnity, financial responsibility, equal employment practices, compliance with local statutes, conflict of interest, and so forth. Of course, these must also be tailored to each specific program.

Arizona's experience has indicated problems with collecting fees at the time of registration rather than at the inspection site. Motorists may request inspections and forego registration, leaving the contractor undercompensated. The model RFP calls for fee collection at the inspection site, and requests that the bidder propose a workable system of accounting for fees collected, or a better alternative.

The model RFP outlines compensation for the contractor based on a projected annual number of inspections, with a declining scale of compensation per additional inspection. Other conceivable compensation schemes include a flat sum, a straight fee per test, cost plus fixed fee and cost plus incentive fee, among other variations. In the case of a cost-plus scheme, the audit provisions of this section would have to be expanded and refined to distinguish allowable cost categories.

Emissions inspection programs are unlikely to succeed without the support of the public. The model RFP requests a plan and budget for public information activities on the part of the contractor, but such activities could just as well be conducted by the state or a separate special purpose contractor.

Circumstances may arise to prevent the normal fulfillment of the contract. The contractor's performance may be unacceptable to the state, even though meeting the legal requirements of the contract. Or the state may repeal statutory authority for the contractor-operated program. The model RFP handles such contingencies by allowing the state to replace or expropriate the contractor if necessary, with sufficient notice and fair compensation.

Should the contractor fail to meet some of the terms of contract, on the other hand, the state would suffer damage. The model RFP asks the contractor to propose a fair schedule of liquidated damages for specific identifiable breaches, although it is conceivable for the state to prescribe a schedule in its RFP.

H. Section VIII - Bidder Qualifications

This section outlines what a bidder must show to prove its ability to fulfil the contract it proposes. This includes evidence of financial backing and organizational resources such as plant equipment, personnel and experience with similar projects. The section also describes the state's criteria for evaluating proposals. The model RFP illustrates a typical scoring scheme, which is of course subject to adaptation to the purposes and priorities of each particular state.

I. Section IX - Cost Proposal

The final section requests the bidder's proposal for an inspection fee appropriate to various possible program formats. The matter of costs also raises the questions of the sliding marginal fee scheme for tests beyond the guaranteed minimum, the costs of inspections provided during the voluntary phase-in period, and the budget for public information activities planned by the contractor.

J. Appendices

Appendices attached to each state's actual RFP would include the statutory authority and regulations governing the program, demographic data, and any detailed specifications for facilities, equipment, test procedures or standards, etc. Since this order of information would be idiosyncratic to any particular state, such appendices have been omitted from the model RFP.

MODEL RFP

Request for Proposal (RFP)
for the
Establishment and Operation
of
Motor Vehicle Inspection Program Facilities

Submit Proposals to:

Paul A. Polluter, Chief,
Bureau of Vehicle Inspections
1987 Compliance Drive
Cleanair, Smogonia 001977

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Establishment and Operation of Motor Vehicle Inspection Program Facilities for the State of Smogonia

Section I - Introduction

This document is a request for a firm proposal and bid on the establishment and operation of a network of official testing facilities for a motor vehicle emissions inspection program (MVIP). The MVIP is mandated by Smogonia Revised Statutes 1125-4029 through 25-4041(1979), and is to be implemented in the counties of Biltmore, Safari, Mountain, and Granada.

All non-exempt in-use vehicles registered in these counties are required to be inspected annually for excessive emissions as of January 1, 1983, as a condition of registration. The inspection facilities are to be operational and available to motorists for voluntary inspections as of July 1, 1982. Vehicles failing inspection will be entitled to reinspection following the necessary repairs.

The Smogonia Departments of Environmental Protection and Motor Vehicles are jointly responsible for the implementation and administration of the MVIP. An interdepartmental team of technical and administrative personnel will review and evaluate proposals, and contractor selection will be based on its findings.

The contractor will be expected to procure inspection sites, build inspection facilities, conduct inspections, and submit documentation of testing activities and test data. The state intends to contract with a single private franchisee for a minimum of five years.

The following information allows a general estimation of the scope of effort required (the estimate is not a guaranteed number):

Estimated number of subject vehicle registrations	1,500,000
Estimated number of vehicles to be retested at 30% initial failure rate	450,000
Maximum driving distance to serve 80% of population	10 miles
Absolute maximum driving distance	30 miles
Test procedure to be utilized	3-mode idle

More detailed specifications are provided in sections V and VI of this document.

This document includes definitions, information, the scope of work, technical provisions, administrative conditions, proposal evaluation criteria, and cost proposal requirements pertinent to an MVIP contract. The requirements and descriptions in this RFP take precedence over all previously published documents, including those attached to the RFP as appendices.

The requirements of this request for proposal and the successful bidder's response will be the basis for the contract terms. Proposals will be evaluated in terms of their responsiveness to each requirement, as well as overall merit and cost, in comparision with other proposals.

Bidders may also propose alternatives, in addition to responding to the basic requirements. Proposed alternatives with supporting technical justification will be evaluated as well as the minimally required responses. Proposals that merely repeat the legislative language or contents of this RFP will be considered unresponsive. Proposals should identify the rationale and methodology to be employed for each task and be in sufficient detail to permit the evaluation committee to assess the bidder's degree of understanding of the total program requirements, the technical appreciation of the various program tasks, and the thoroughness with which it will implement the MVIP. The response to the RFP must be submitted in three volumes:

1) Technical Proposal
2) Management Proposal
3) Cost Proposal

Twelve copies of the proposal (Volumes 1, 2, and 3) must be received on or before 5 P.M., June 30, 1981. Address responses to Paul A Pollution, Chief, Bureau of Vehicle Inspection, 1987 Compliance Drive, Cleanair, Smogonia, 001977. All bidders are advised that the proposal will become property of the State and will not be returned. All submitted documents will be held in strict confidence by the State. All bidders should advise the Bureau of their "bid/no bid" decision within 10 days of receipt of the RFP.

Questions and correspondence regarding this RFP are also to be addressed to Paul A. Pollution, at the above address. Responses to questions and correspondence will be provided at the bidder's conference, scheduled for April 15, 1981, at Room 212, 1987 Compliance Drive, Cleanair, Smogonia. Notification of the contract award will be made about August 15, 1980.

Section II - Abbreviations and Definitions

Whenever the following abbreviations and terms (or pronouns in place of them) are used in the RFP, their meaning shall be as follows:

A. Abbreviations

AC	Alternating Current
ANS	American National Standard
ANSI	American National Standards, Institute, Inc.
ARD	Automotive Repair Dealer
ASCII	American Standard Code for Information Interchange
ASTM	American Society for Testing and Materials
CFH	Cubic Feet Per Hour
CFM	Cubic Feet Per Minute
CNG	Compressed Natural Gas
CRT	Cathode Ray Tube
CO	Carbon Monoxide
CO2	Carbon Dioxide
DC	Direct Current
EIA	Electronics Industries Association
°C	Degrees Celsius
°F	Degrees Fahrenheit
GVW	Gross Vehicle Weight
HC	Hydrocarbons
HDV	Heavy Duty Vehicle (over 8,500 pounds GVW)
HP	Horsepower
Hz	Hertz
IBM	International Business Machines, Inc.
IEEE	Institute of Electrical and Electronic Engineers
I/M	Inspection/Maintenance
K	Kilo or x 1,000 when used with any dimensional unit
KV	1,000 Volts
LDV	Light Duty Vehicle (8500 pounds or less GVW)
LPG	Liquid Petroleum Gas
MA	0.001 Amperes
MPH	Miles Per Hour
MV	0.001 Volts
MVIP	Motor Vehicle Inspection Program
NBS	National Bureau of Standards
NDIR	Nondispersive Infrared
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NO	Nitric Oxide
NOx	Oxides of nitrogen, including undetermined portions of NO and NO2.
OSHA	Occupational Safety and Health Act
OVEIP	Official Vehicle Emission Inspection Program
P-P	Peak to Peak
PPM	Parts per Million
RFP	Request for Proposal
RPM	Revolutions per Minute
SAE	Society of Automotive Engineers
V	Volts

B. Definitions

Accuracy: The combination of bias and precision errors, technically defined as uncertainty, that quantify the difference between the analyzer reading and the true value (see equivalency).

Analytical Gases: Gases of known concentration used in the analytical process as a reference. The four basic categories are:

Gas	Use
a) Zero Gas	Laboratory, Manufacturer, and State Auditor
b) Calibration Gas	Laboratory and Manufacturer
c) Audit Gas	State Auditor
d) Span Gas	Field Emission Inspection

Analysis System: A system that incorporates an analyzer(s) and sampling components for the purpose of exhaust gas analysis.

Analyzer: A device that has the capability to identify unknown concentrations of particular constituents in automobile or truck exhaust gases by comparison to analytical gases. Commonly used interchangeably with "instrument".

Bidder Any person, firm, partnership, corporation, or combination thereof, submitting a bid for the work contemplated, acting directly or through a duly authorized representative.

Calibration: The act of defining or checking the full calibration curve of the analyzer. Generally considered a laboratory procedure, calibration requires 6 to 12 calibration gases per analyzer range or scale.

Calibration Curve: A curve (usually a polynomial) that describes the relationship between meter movement (i.e. chart deflection or voltage) and concentration level. For field instruments the calibration curve is usually fixed at the factory.

Calibration Gases: Analytical gases that are used to determine the accuracy of an analyzer calibration curve. Calibration gases are usually traceable to NBS Standard Reference Materials within 1%.

Change - Any change in the Contract authorized by the specifications.

Contract - The written agreement covering the furnishing of labor and materials and the performance of the work. The Contract shall include bonds when required, drawings and all agenda, and changes to foregoing documents.

Contractor - The person or persons, firm partnership, corporation, or combination thereof, private or municipal, that has been awarded a contract with the State of Smogonia, or the legal representatives of such entity.

Days - Calendar days, unless otherwise designated.

Disabled Area: An area convenient to the testing lanes for the purpose of temporarily locating vehicles that become inoperable in the test lanes.

Drift: The average amount of change with time of analyzer reading. Two components of drift are:

a) Zero drift - average change in zero reading
b) Span drift - average change in the difference between the zero and span readings

Facility - The building and equipment at any single site which implement the vehicle inspection capability.

Facility Down-time - That period of time during which a single facility is not capable of performing the total intended function (including automated test operation), as defined in this RFP. Facility down-time does not include the time required for conducting the contractor's calibration and maintenance procedures if such procedures require not more than two hours down-time per week. Facility down-time does include all time required to diagnose and correct equipment failures which simultaneously disable a complete facility.

Interference (electronic): Analyzer read-out errors caused by instrument response to electromagnetic sources and power supply variations. Common forms of electromagnetic sources are:

a) Radio Frequency Interference (RFI)
b) Very High Frequency Interference (VHF)

Interference (gases): Analyzer read-out errors caused by instrument response to non-interest gases typically occuring in vehicle exhaust.

Lane Down-Time - That period of time during which a single lane is not capable of performing in accordance with the intended use as defined in the RFP, excluding the time required for Contractor's calibration and maintenance procedures.

Output Rate - Number of vehicles completely inspected per unit of time, usually expressed in vehicles per hour.

Position - A portion of a lane where vehicle inspection tasks are conducted.

Program - Motor Vehicle Inspection Program.

Queue - A vehicle or vehicles that are waiting to be inspected, usually in a line.

Queuing Area - The area in front of the doors of the facility that is intended for temporary storage of the vehicles waiting to be tested.

Source Medium - The medium selected for system software generation, such as cards, magnetic tape, punched tape, or magnetic discs.

Span or Spanning: The act of adjusting the analyzer's calibration curve into the correct reference frame. Gas Spanning uses a span gas for a reference during the adjustment process. Electrical spanning attempts to duplicate the span gas voltage level to be used as a surrogate reference during the adjustment process.

Span Gases: Analytical gases that are used to adjust or return the analyzer response characteristics to those determined by the calibration gases.

Test Time - The total time for one vehicle to be completely tested, beginning when the vehicle is released by the owner to inspection station personnel and ending when the owner leaves the facility with the vehicle.

True Dynamometer Horsepower - Measured horsepower plus windage, friction, and other losses in the dynamometer.

Work - All the work specified, indicated, shown, or contemplated in the contract.

Section III Program Information

A. Statutory Authorization

Authorization for the motor vehicle inspection program is provided in Smogonia Revised statutes 1125-4029 through 25-4041 (1979) (Appendix A). The statute requires annual inspection of all nonexempted light duty motor vehicles, to establish their conformity with emissions standards as a precondition of annual vehicle registration. Vehicles failing the inspection must receive a written indication of defects likely to have caused the failure from the inspector, and then must have the necessary repairs performed in order to pass a re-inspection. Required repairs are limited as described in Section VI.D. Waiver Criteria.

B. Regulations

Regulations fixing the procedures and standards for the required emissions inspection, the qualifications of inspection personnel, motorist protection measures, classes of vehicles exempt from the requirement, and so forth, are found at 79 Smogonia Administrative Code 358, under Title 21, Health and Environmental Regulation; Chapter 42, Motor Vehicle Inspections.

C. Published Documentation

The following documents are the only publicly available sources of background information on the Smogonia MVIP:

1. The Feasibility of An Official Vehicle Emissions Inspection Program, Volume I and II - a report to the legislature submitted by DEP January 15, 1978. This report includes conceptual approaches for various test methods, network operations and instrumentations.

2. Evaluation of Automated Vehicle Test Methods PAE Study Corporation, Nov. 1978. This report evaluates four conceptual approaches for automated vehicle testing.

3. Cost Effectiveness of Automotive Parameter Checks, FAMC Corporation, July 1978. This report evaluates the cost-effectiveness of parameter checks on various control technologies in maintaining design emissions characteristics.

These documents will be available to all bidders for review at 1987 Compliance Drive, Cleanair, Smogonia, during normal business hours, until the bid submission deadline, June 30, 1981. Responses to questions about this information, as well as any additional information which becomes available, will be provided at the bidders conference, April 15, 1981. Of course, the requirements and descriptions presented in this RFP supersede those in the listed documents.

Section IV Contract Requirements

A. Scope of Work

The contractor will be expected to do all things necessary or incidental to the following tasks in implementing the MVIP, including furnishing the necessary personnel, facilities, equipment, etc.:

Task 1: Design the MVIP Facility Network: Each proposal must include a design for a network of inspection facilities meeting the technical requirements of Section V. The design must account for possible expansions of the program to incoporate safety inspections and loaded mode emissions inspections.

Task 2: Acquire Sites and Construct Inspection Facilities: The contractor must select, acquire, and prepare sites acceptable to the State, and construct on them inspection facilities, in accordance with the technical requirements of Section V.

Task 3: Install Inspection Equipment: The contractor must install inspection and data collection equipment meeting the requirements of Section V at each inspection facility.

Task 4: Operate Vehicle Inspection Network: The contractor must be completely responsible for the operation and maintenance of all inspection facilities, in accordance with the provisions of Sections V and VI regarding inspection procedures, operations, equipment quality audit, and documentation. The contractor must follow the program schedule set forth in Section IV commencing operation of the facility network on July 1, 1982, and continuing to operate it until at least December 31, 1987, subject to program extension or termination under the conditions established in Section VII.

Task 5: Submit Documentation and Test Data:

The contractor must submit documentation and test data to the state, as provided in Section V. and VI.

B. Program Schedule

The statutory mandate for the MVIP requires that inspections be available to motorists on a voluntary basis as of July 1, 1982, and that they be prerequisite to vehicle registrations as of January 1, 1983. Each contract proposal must include a detailed schedule for the accomplishment of each critical task for implementation of the program.

Section V - Equipment Specifications

A. Introduction

Bidders are required to include in their proposals a description of all of the equipment necessary to conduct the I/M program outlined in the Operating Requirements (see Section VI). The equipment specifications provide to the bidder specific requirements and guidelines relating to the test facilities, and the testing equipment. Guidelines on other equipment that may be required is at the discretion of the bidder with the exception that the equipment must comply with the "general specifications" for equipment requirements (see Subsection V.D.1.). Additionally, the bidder must coordinate all of the test facilities into a network that provides for proper location and utilization of the individual facilities. An outline of the subsections is as follows:

Section	Title
B	OVEIP Network Requirements
C	OVEIP Site and Facility Requirements
D	Equipment Requirements
E	Documentation Procedures
F	Warranty Requirements

B. OVEIP Network Requirements

1. The approximate location and number of facilities shall be indicated in the proposal. The technical approach used to arrive at the number and location shall also be provided, as well as necessary revisions required to incorporate a safety inspection along with the emission inspection. The facilities shall be incorporated into a network that meets the following requirements.

a) Legislative Requirements: The legislation requires mandatory annual emissions inspection of all nonexempt vehicles in nonattainment counties. Figure 1 depicts the approximate boundaries.

b) Other Guidelines:

1) The estimated number of vehicles to be inspected annually is listed by county in Table 1. The proposal shall include sufficient resources (facilities, personnel, etc.) with justification to inspect the number of vehicles listed in Table 1 on an annual basis.

2) The bidder should propose his network design with technical justification in terms of vehicle maximum and average driving distance, motorist convenience, and fee (see Section IX for inspection fee cost proposal).

C. OVEIP Site and Facilities

1. Inspection Site Requirements

The contractor shall acquire the inspection sites in accordance with his proposed facility network design as outlined in subsection V.B. The sites shall be located within three miles of the bidder's proposed locations. (In the event that a proposed facility location falls outside this three-mile radius, State approval of such a location will be required). The State will approve each site subject to the contractor's proposed network design criteria and only if the following criteria are met:

a) Zoning: Proper zoning for construction and operation of a vehicle inspection facility shall be cleared through the appropriate authorities.

b) Location: The inspection site shall not be located near schools, parks, or hospitals. The ease of ingress and egress from the facility shall not impede traffic flow.

c) Environmental Reports: The State shall have the responsibility for preparing the program Environmental Impact Report (EIR) for the entire Vehicle Inspection Program. This program EIR will address, as specifically as possible, the environmental impact of the vehicle inspection stations to be constructed within the specific counties. The State will file notices of determination for specific sites selected to verify that these sites conform to the requirements and standards established by the program EIR.

d) Land Requirements: The minimum lot size for a two-lane facility shall be 125-foot frontage by 200-foot depth (25,000 net square feet). A four-lane facility shall have a minimum lot size of 175-foot frontage by 200-foot depth (35,000 net square feet). Allowances will be made for sites with a different number of lanes and for irregularly shaped lots.

e) Queuing Area: The number of queuing spaces on the inspection site shall be at least twelve for each inspection lane.

f) Disabled Area: The number of disabled spaces on the inspection site shall be at least two for each inspection lane. The disabled spaces shall be convenient to the testing lanes and the location must be consistant with the manner in which disabled vehicles will be removed from the testing lanes.

g) Parking: For every 400 square feet of facility area, one parking stall shall be provided (for employees and visitors).

h) Landscaping: At least 3% of the total inspection site area shall be landscaped.

2. OVEIP Facility Requirement

The contractor shall construct the inspection facility in accordance with State-approved floor plans and construction concepts. The contractor shall provide preliminary plans and, upon approval of the preliminary plans, shall submit working drawings for approval by the State. The following items shall be included in the facility requirement:

a) Architectural Design: The design of the facility shall be in keeping with the surrounding community architectural theme. The architectural design shall be reviewed and approved by both the State and local authorities. The builder shall have the construction conform to all local zoning laws, ordinances, and building codes or the current uniform building code, whichever is more demanding in its requirements.

b) Additional Length for Revised Inspections: The contractor shall design, place, and construct the facility in a way that would allow additional inspection positions to be added later to accomodate revised or additional inspections. It is expected that the magnitude of such additions would be limited to one inspection position in each lane.

c) Safety and Fire Requirements: The facility shall conform to regulations and orders of the State Department of Industrial Relations, the Occupational Safety and Health Act, and the requirements of the State Fire Marshall Safety Order.

d) Ventilation: The facility shall provide adequate ventilation to the vehicle inspection and other areas so that ambient carbon monoxide exposure of employees does not exceed 400 ppm-hours on any one day of operation or that the rate of accumulation does not exceed 50 ppm-hours per hour or a maximum concentration of 300 ppm. CO monitors are required, the detectors for which shall be placed adjacent to the emissions test position of each lane 5 to 6 feet above the floor. Records shall be maintained for a minimum of five years.

e) Vehicle Size: Each facility shall provide the capability of accommodating and testing gasoline powered vehicles up to 33,000 pounds of GVW. Only one lane per facility need have capability above 8500 pounds of GVW.

f) Adaptability to Loaded Mode Testing (if applicable): There shall be provisions for easy and rapid retrofit of each lane of each facility for loaded mode testing. These provisions shall include space in the floor slab for a dynamometer and installation of all utilities and services which cannot later be installed without breaking up or

cutting into the floor slab. The bidder shall include in his bid specifications for a dynamometer which is compatible with the provisions for retrofit. The dynamometer shall be capable of testing vehicles up to 8500 pounds of GVW and shall conform to the specifications in subsection V.D.10.

g) Tire Inflation Air: A source of compressed air available 24 hours a day to the public shall be provided at a convenient location.

3. Bid Requirements

For the response to this RFP, the bidder must submit typical configurations of each site and facility by type, layout and schematics, and an artist's conception of the building and landscape. Detailed construction plans and blueprints are not required for bid response.

D. Equipment Requirements

1. General Specifications

All equipment shall be designed and constructed so as to comply with current OSHA regulations as implemented by the State. Specific features shall be in accordance with the following paragraphs:

a) Equipment shall be designed for easy access to all components contained within enclosures. Slide-out or hinged mountings with quick-disconnect connectors and handles for extraction shall be employed where enclosures would otherwise prevent access to equipment.

b) Mechanical and electrical interchangeability shall exist between like assemblies, components, and their replacement parts.

c) Unless otherwise specified, batteries shall not be incorporated in the design of any equipment supplied under the contract. Battery backup to maintain computer functions (memory, time keeping, etc.) is acceptable.

d) Electronic enclosures shall provide dust-protective housing of sheltered equipment. Ventilating air flow shall be filtered. The enclosures shall provide complete dustprotective housing of equipment. National Electrical Manufacturer's Association (NEMA) standards for enclosures shall be applied.

e) The National Electric Code shall govern all electrical installation of equipment and electrical distribution systems. This requirement shall not relieve the contractor from the responsibility of meeting the requirements of all applicable local electrical codes.

f) Performance of equipment shall be protected from degradation by the presence of interference signals, which may be present at any facility. It shall be the contractor's responsibility to determine the degree of interference control required at each site. Equipment shall be prevented from generating interference signals that will affect the proper operation of any equipment in the facility.

g) Cables used in the test lane shall be designed of material resistant to gasoline, gasohol (20% mixture), oil, water, and engine exhaust. They shall be of heavy construction to survive abuse. Bundled cables shall be protected from abrasion and fraying or dislocation of individual conductors.

2. Inspection Analyzers

The emission inspection analyzers shall be accredited and meet the U.S. EPA's recommendations found in EPA-AA-IMS-80-5-B for manual systems. The computer operated analyzer (see EPA-AA-IMS-80-5-A and EPA-AA-IMS-80-5-B) may be bid in place of the manual system.

3. Calibration Gases

Calibration gases shall be traceable to NBS SRMs. Sufficient calibration gases shall be on hand to perform periodic multi-point calibration checks for each range used on each analyzer.

4. Span Gases and Gas Delivery System

Span gases shall be traceable to NBS SRMs. It is perferred that the span gases be located in a central ventilated enclosure (minimum storage temperature 40°F) at each facility. It is the bidders responsibility to insure that the manifolded span gas lines to each test lane are installed in a manner that allows easy maintenance access and are leak free. The span gas enclosure and manifold system should be capable of accepting one standard "6-Pack" carrier of "1A" or "T" size bottles for every six(6) test lanes. The bidder may submit other span gas supply systems as an alternative with proper justification (cost, technical, and operational), comparing the preferred system to the alternate system.

5. Calibration and Maintenance Equipment

The bidder shall include in the proposal the general type of equipment and facilities that will be available for performing preventative maintenance, performing equipment repairs, and insuring that the analyzers are operating properly before they are returned to service.

6. Catalyst Inspection Equipment

The bidder shall include in the proposal the type of equipment that will be available for observing the underside of inspected vehicles to identify catalyst tampering. All devices including those that use mirrors shall be designed in a manner that does not require the inspector to stoop over to perform the inspection.

7. Spare Parts Inventory

The contractor shall maintain sufficient spare parts or have a guaranteed delivery of spare parts that will allow the contractor to meet the reliability requirements in subsection VI.F.8.

8. Disabled Vehicles

The contractor must identify the means by which disabled vehicles will be moved out of the test lanes to the disabled area.

9. Idle Speed

The bidder must propose the necessary equipment to measure vehicle idle speed.

a) For facilities without automatic data collection, a simple RPM display accurate to ±3% is adequate.

b) For facilities utilizing automatic data collection (ADC) equipment, the RPM data must be accessible through an RS 232 port for storage.

c) Retrofit Idle Pass/Fail System:

1) If the state elects to include an additional test to determine excessive idle speed, the contractor shall make and implement the proper changes to the equipment, forms, procedures, etc. that will allow excessive idle speed to be used as a pass/fail criteria during the emission test. An ADC system may make a pass or fail decision based on idle speed limits stored in a computer.

2) The state may select the retrofit excessive idle speed pass/fail option at any time before or after the contract is awarded.

10. Retrofit Option, Chassis Dynamometer

The bidder must include in the proposal as a retrofit option a chassis dynamometer. The proposal shall include any necessary equipment and facility modifications (if necessary) that will allow the state to exercise the retrofit option at any time either before or after the contract is awarded and the facility constructed. The necessary equipment shall include any modification required to the emission analyzer to permit loaded operation (loaded mode kit requirements can be found in report No. EPA-AA-IMS-80-8). In addition, the chassis dynamometer shall provide rolls to support the driving wheels (including those of front and rear wheel drive vehicles but not including those of four-wheel drive vehicles) of vehicles to be tested, and to permit their continuous rotation. The power generated by the vehicle engine and delivered to the rolls through

the tire treads shall be transmitted to a power-absorption device. The load may be established by the physical design characteristics of the absorber or by automatic control. The horsepower may be measured and monitored by a computer. The frame and roll assembly(s) shall be suitable for mounting below floor level in a manner to permit standard vehicles of all makes to be driven over the rolls to the test position, to be tested in a level attitude, and to be driven off after test. Roll brakes and a between-rolls plate form shall enable easy movement of the vehicles in and out of the dynamometer. The dynamometer design shall provide for safe testing of front wheel drive vehicles.

The chassis dynamometer shall provide the following capabilities:

a) Power Absorption: The dynamometer shall be capable of being adjusted to produce a load of 9.0 ±1.0 hp at 30 mph.

b) Speed Accuracy: Speed shall be measured with an accuracy of ±1.0 mph at 30 mph true roll speed.

c) Short Term Stability: Power absorption at constant speed shall not drift more than 0.5 hp during any single test mode.

d) Roll Weight Capacity: The dynamometer shall be capable of supporting the driving axle of vehicles rated up to 8,501 pounds gross vehicle weight.

e) Between Rolls Wheel Lifts: These shall be manually controllable and capable of lifting 6,000 pounds (only applies if twin roll dynamometers are proposed).

f) Roll Brakes: Both rolls shall be locked when the wheel lift is up.

g) Electrical Output Signals: These shall provide a representation of dynamometer speed and true horsepower.

h) Roll Configuration: Each roll shall have a diameter of not less than 8 inches. The rolls shall be spaced so that a tire whose radius is 13 inches will contact the rolls with an included angle from the wheel center to the roll centers of not less than 58 and not more than 63 degrees. The rolls shall provide a contact surface not less than 96 inches wide. If the rolls are divided, the inner-end-to-inner-end dimension shall not be more than 24 inches.

i) Speed and Horsepower Indications: Meters or their functional equivalent shall be provided in the Test Display Unit and shall include a speed indication and horsepower indication (resolution: speed, 1 MPH; power, 1 HP) having single scale lengths of not less than 7.5 inches. The speed scale shall indicate 0 to 60 mph and the horsepower scale shall indicate 0 to 40 hp.

j) Dynamometer Calibration: Provisions shall be included in the instrumentation system to calibrate the dynamometer for speed and true horsepower (i.e. includes bearing losses etc. to identify true roll HP) in the field. The calibration unit shall consist of all devices and accessories necessary to perform periodic calibration and adjustment of the dynamometer to specifications.

k) Safety Interlock: A Roll Speed Sensor and safety interlock circuit shall be provided that prevents the application of the roll brakes and upward lift movement at any roll speed above 1/2 mph.

11. Optional Automatic Data Collection with Operator Interaction (not a retrofit option)

The bidder may propose as an option, an interactive real time data collection system. The system may consist of one central computer tied directly to the test equipment in each lane, or it may consist of a host computer tied to a microprocessor in each lane which is in turn tied to the test equipment. The system used shall be interactive in that the operator is prompted for input data and testing instructions, the equipment is interogated for test data, and the computer returns a pass or fail decision (with test results) based on the input and test data. The real time system shall perform the following functions:

a) Minimum: All testing functions specified in Chapter VIII of EPA Report No. EPA-AA-IMS-80-5-B ("Recommended Specifications for Emission Inspection Analyzers").

b) Minimum: The automatic data collection function (and data) specified in Chapter IX of EPA Report No. EPA-AA-IMS-80-5-B ("Recommended Specifications for Emission Inspection Analyzers").

c) Minimum: The real time system shall have provisions for the addition of retrofit equipment (idle speed, dynamometer). All new parameters such as roll speed and power absorption shall be measured, collected and integrated into the requirements specified in this subsection.

d) Minimum: The central or host computer shall generate a data base of test data, retest data, waiver and maintenance records (see Section VI for proper format). Bulk data storage devices may be used for analysis on larger computers.

e) Minimum: The central or host computer shall allow and provide for access to, editing, and generation of reports from the data base. An access code system must prevent unauthorized editing of the data base.

f) Minimum: The central or host computer shall allow and provide for access and editing of all programs in the system. An access code system must prevent unauthorized editing of the programs.

g) Minimum: Digital sample rates of analog measurement signals shall be at least 10 hertz.

h) Minimum: Each lane shall have an appropriate data input terminal or equivalent for the inspector.

i) Minimum: The computer or microprocessor shall limit-check all input data, and notify the operator or inspector of out of limit conditions.

j) Minimum: The system software shall consist of all necessary programs that will allow the real time computer system to correctly perform all of the functions specified.

1) All software written shall be prepared to achieve the basic goals listed below in order of importance as listed:

i. Reliability
ii. Modifiability
iii. Understandability
iv. Efficiency

2) The programs shall be constructed in modules consisting of not more than 800 assembly language statements each, divided functionally so that each module makes no assumptions about the operation of modules other than those contained in the module interface specifications. Interface specifications of all modules shall be explicitly stated in the software documentation.

3) Any modifications to the software, either before or after completion, shall be made by correcting the source medium and recompiling or assembling rather than by patching, to ensure that the final software is reliable, modifiable, understandable, and properly documented.

4) The software provided shall function correctly. It shall enable control of all devices as specified. The software shall function without modification in any size facility configuration.

k) The bidder may propose as an option any additional features or programs that will improve efficiency, flexibility, or other aspect of the facility.

E. Documentation Requirements

In order to guarantee that the State would have sufficient data available to operate the test facilities in the event that the contract option for State purchase of the inspection facility or network is exercised, as outlined in subsection VII.E., the entire system shall be fully documented. All final documentation and all design changes shall be documented as required in this section.

1. Design Documentation

Design documentation shall be submitted to the State Representative for review and approval on a schedule that shall be a part of the contractor's proposal as required in subsection IV.B. Design documentation shall be provided for the location, acquisition, and layout of sites, construction of buildings, completion of equipment, and provisions of software.

a) Site Acquisition Plan: Prior to beginning the process of acquiring sites for inspection facilities, the contractor shall submit his plan for location of sites and for selection of the final sites to the State Representative for approval. The plan shall indicate how the site selection criteria required in subsection V.C. will be satisfied.

b) Facilities Design Data: The contractor shall submit building plans to the State Representative for approval prior to beginning building construction, in accordance with subsection V.C.

c) Equipment Design Data: Design documentation shall consist of such working drawings and data on materials and equipment as are required for the proper control of the work, including but not limited to fabrication drawings, layouts, and similar classes of drawings. Data on materials and equipment include materials and equipment lists, catalog data sheets, performance curves, diagrams, and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish, and all other pertinent data. Design documentation shall include, but is not limited to, the following specific documents:

1) Master block diagrams of the complete system. These drawings shall contain sufficient information to serve as the assembly drawings for the system.

2) Equipment layout for each type of facility showing the precise location of each major item of equipment and the required utilities for each. Electrical service shall be indicated by voltage, phase and current load, shop air by pressure and maximum volume flow, water by pressure, temperature and maximum volume flow, and water drain location.

3) Master assembly parts lists, with assembly breakdown showing major subassemblies and equipment items and major .omponents within such subassemblies by name and part number.

4) Interface control drawings.

5) System cabling drawings, wire lists, and terminal and connector designations.

6) Installation drawings and procedures. All details shall be final and shall cover all phases of installation such as pit requirements, air supply, electrical requirements, water supply and disposal, and complete installation procedures.

7) Pneumatic and electrical schematics of the system and all major subassemblies and items of equipment.

2. Software Design (optional, only needed if Real Time System is used)

The bidder shall submit as part of the Proposal an overall plan for the design and implementation of the System Controller programming. The plan shall contain milestones indicating when major events (i.e., design, coding, testing, etc.) will begin and end, and shall indicate how the bidder intends to ensure a close cooperation between State and contractor, including a schedule for meetings to review the programming progress.

Following the completion of the programming, the contractor shall submit to the State Representative one copy of the final program documentation. Two additional copies shall be submitted prior to final acceptance of the last system. All copies shall be neatly bound looseleaf in three-ring binders and pages shall be numbered in such a manner that revised sheets may be easily added in place or in addition to those originally supplied.

In the event that errors or omissions on the part of the contractor require modification of the software subsequent to delivery of the software documentation, the contractor shall correct all copies of the documentation.

System software documentation shall consist of a preface and four divisions as described below. If two or more volumes are used, Division Four shall be in a separate volume. Each division shall be provided with a Table of Contents.

a) Preface - A general Table of Contents, Table of Illustrations, Charts, and Diagrams and a general description of the operation of the System Controller with all peripheral devices.

b) Division One - System Description

Section 1. A Table of Contents which generally itemizes the contents of division one. Included in this Table of Contents shall be cross-reference of program names to subsystems.

Section 2. General Description - This section shall present the overall purpose of what the program is to accomplish. All assumptions by the contractor shall be stated with their reasons.

Section 3. Inputs and Outputs - All input data sources and system outputs shall be listed. A brief statement as to source, disposition, content, and meaning that is required to identify and clarify the items listed shall be included.

Section 4. Operation Objectives - This section shall describe the operational objectives for each major section of the program logic and shall include the relationships to other major sections. These descriptions shall be divorced from any reference to a specific computer, assembler, or compiler.

Section 5. A System Chart - A general flow chart showing the entire system, all of the inputs to the system, and the outputs generated by the system. The operations to be performed by each subsystem shall be described to include major decisions. Cross reference to all detail descriptions of particular programs shall be included.

c) Division Two - Program Flow Charts and Narratives

Each program flow chart shall be preceded by a narrative describing what the program does, what it uses as input, and what it produces as output. Module interface specification shall be included in this narrative. Each module of the programming logic shall be presented in detail in program flow charts with the use of statement and decision blocks with lines connecting these blocks to show the flow of information. Mathematical and/or engineering terminology and equations shall be incorporated when necessary to fully describe the operation being performed. Details of register operations are not required.

d) Division Three - Appendix

Section 1. Off-Line Software - Instructions for use, memory dumps, listings, narratives, and flow charts.

Section 2. Terms and Definitions, including:

a. Description of table and special non-data terms and definitions commonly used with the system.

b. Description of the data base and list of data names and definitions which are used within the system.

c. A list of any mathematical formulas used in coding, showing the equation reference number (same as that in the Program Flow Chart), use of the equation, constants used in the equation, value of each constant, and the constant's label, if any.

d. A glossary listing of every variable used in the coding with the label and description for each variable.

Section 3. Hardware Descriptions and Documentation -
This shall include manufacturers' programming manuals and a general description of system hardware as it affects software details.

Section 4. Memory and Mass Data Storage Utilization Maps -
a map of the internal storage of the System Controller shall be provided. It shall show the numbered locations of the memory and the information stored in each location, including any overlay areas. In addition, maps of the storage of programs and data shall be provided. They shall show the areas occupied and the information stored in each.

e) Division Four - Program Listings

Section 1. Listing of source language statements, if not assembly language.

Section 2. Program assembly listings - A complete and fully debugged annotated assembled listing of all coding required for successful running of the supplied software programs. The listing shall match the programs as supplied in final form. The listing shall include the following as a minimum:

- Location counter values (P-register values)
- Machine language operation codes
- Machine language operands
- Assembly language coding labels
- Assembly language mnemonic operation codes
- Assembly language mnemonic operands
- Comments

The listing shall be compatible with the program flow charts. Comments shall describe the required operations work each instruction is performing.

3. Final System Documentation

a) Final system documentation supplied to the State shall include the following items as a minimum:

1) One copy of the final "as-built" building and site plans for each facility, correct in every detail.

2) One set of maintenance and operation manuals for all system equipment.

3) Software documentation specified in paragraph V.E.2.

4) Complete wiring, plumbing and interconnection diagrams for all system equipment in each facility.

b) Final system documentation shall be supplied upon completion of the last facility. It is not the State's intent that this documentation include chip or circuitboard details or patent information. Information necessary for maintenance at the component replacement level should be provided.

4. Documentation of System Changes

a) System changes subsequent to completion of each system shall be documented in a manner similar to that used for the original design of the affected unit. Reasons for changes and an indication of the effective date of the changes shall be included. All copies of documentation previously delivered to the State Representative shall be updated.

F. Warranty Requirements

In the event that the State would exercise the contract option as outlined in subsection VII.E., to purchase any individual facility or the entire inspection network as described in Chapters V and VI, warranties shall be provided for facilities, equipment, and software.

1. Equipment Warranties

The contractor shall guarantee that total system hardware performance shall meet specifications for a period of six months from date of transfer of ownership to the State. Warranty work shall be performed on site at no expense to the State. This includes parts, labor, travel, and other expenses incurred by the contractor or his representatives. Warranties will be applied on a facility basis, that is, the period of warranty for equipment at each facility shall commence on the date that particular facility is transferred to the State.

In addition to the contractor-supplied warranty, any vendor or original manufacturer warranties shall be transferred to the State upon transfer of each facility to the State.

2. Software Warranty

System Controller software shall be warranted for a period of one year from date of transfer of the last facility to the State. The warranty shall guarantee source and load media integrity and the functional capability in accordance with specifications. System software modifications by the State after delivery by the contractor shall not be warranted. The original software, including copies of source media and documentation, shall be available from the vendor during the period of warranty for a sum not to exceed $200.

VI. Operating Requirements

A. Overview

The contractor is responsible for operating the inspection program under state oversite and per the procedures in this section. The contractor's tasks involve operating the facilities, following the required administrative procedures, inspecting vehicles, providing the proper reports, and utilizing the necessary QA/QC procedures to insure that valid data is obtained. An outline of the subsections is as follows:

Section	Title
B	Facility Operations
C	Inspection Procedures
D	Waiver Criteria
E	Reports
F	QA/QC Requirements for Inspection Testing
G	State Access to Facilities
H	Pre-Acceptance Contract Requirements

B. Facility Operations

The contractor is responsible for operating the facilities and the coordination of operations within the network. As such, the contractor shall be responsible for the hiring and training of staff for each inspection station. This staff shall consist of adequate inspection personnel dependent on the number of individual lanes proposed, station management needed to supervise station activities, and a technical staff to maintain and calibrate the inspection equipment. The proposal must address how the bidder proposes to comply with the following operational criteria.

1. Hours of Operation

The contractor shall schedule the hours of station operation to accommodate the vehicle population and public convenience in specific areas. This shall not be less than 40 hours per week. The proposed operation schedule and schedule changes must be approved by the State.

2. Personnel Qualifications

The contractor shall staff stations with personnel meeting qualifications consistent with the scope of work required to perform the inspections and related maintenance activities.

Appendix C outlines the State's personnel job specifications for hiring vehicle inspectors and line managers. The contractor may use these specifications as a guideline.

3. Training

The contractor shall train all personnel required to operate and maintain the inspection system. Courses shall contain specialized information required to train personnel to perform their required tasks. Curricula shall include, but need not be limited to, the following:

a) OVEIP Program Orientation

b) Vehicle Emissions and Standards

c) Inspection and Facility Operation Procedures

d) Techniques of Malfunction Diagnosis and Repair

e) Public Relations

f) Complaint Handling

4. Interface with Auto Repair Industry

The State shall be responsible for interfacing with the automotive repair industry to upgrade the training of auto mechanics and to resolve inspection-related repair actions. The contractor shall direct such items to the designated State department, as necessary.

5. Consumer Complaint Handling

Consumer complaints regarding vehicle-inspection activities shall be handled by the contractor if at all possible. The contractor shall submit a monthly report on the status of all consumer complaints, including those unresolved, to the OVEIP staff.

6. Consumer Vehicle Damage

The contractor shall be fully responsibile for any and/or all vehicle damage during inspections as required in subsections VII.H. and I.

7. Inspection Personnel Attire

The contractor shall require inspection personnel directly involved with consumer and emissions testing to wear uniforms. The contractor shall submit samples of the uniforms to the State for approval.

8. Safety

The contractor shall comply with all local, State, and federal safety standards. Operations shall cease if ambient CO exceeds 400 ppm-hours in a work shift, 50 ppm-hours per hour, or a maximum instantaneous level of 300 ppm (see subsections V.C.2., and VI.F. for CO detector and recording requirements). The contractor's safety program shall include, but need not be limited to, the following areas:

a) Fire
b) Earthquake
c) Civil Disturbance
d) Bomb Threat
e) Explosion
f) Personnel Evacuation Plan
g) Personnel Operating Procedures

9. Contractor Operating Procedures

The contractor shall provide to the OVEIP staff detailed procedures containing the work task assignments of the inspection personnel and line management. These procedures shall cover both idle, and if used, loaded mode inspection regimes. The State will retain the option of conducting on-site surveillance to ensure compliance with the operating procedures.

10. Security

The contractor shall be responsible for the security of the facility. Specifically:

a) The contractor shall propose methods to prevent unauthorized tampering with the inspection equipment, and

b) The contractor shall propose a system of security for certificates of compliance and certificates of waiver such that fraudulent certificates will not be produced. Methods must include strict accounting of all certificate forms, and may include machine production or completion of each certificate on-site for each vehicle eligible for each certificate.

C. Inspection Procedures

A flow chart of the Inspection process is presented in Figure VI-1. A listing of the major tasks is as follows:

Subsection	Title
1.	Determine Eligibility for Testing
2.	Pre-Test Inspection Criteria
3.	Inspection Test
4.	Test Report
5.	Diagnostic Statements
6.	Legal Proof of Conformity

These subsections detail the inspection requirements. The bidder must propose sufficient resources (facility design, equipment, personnel, time, etc.) to perform the requirements. The bidder must also propose the means by which the bidder would implement these requirements.

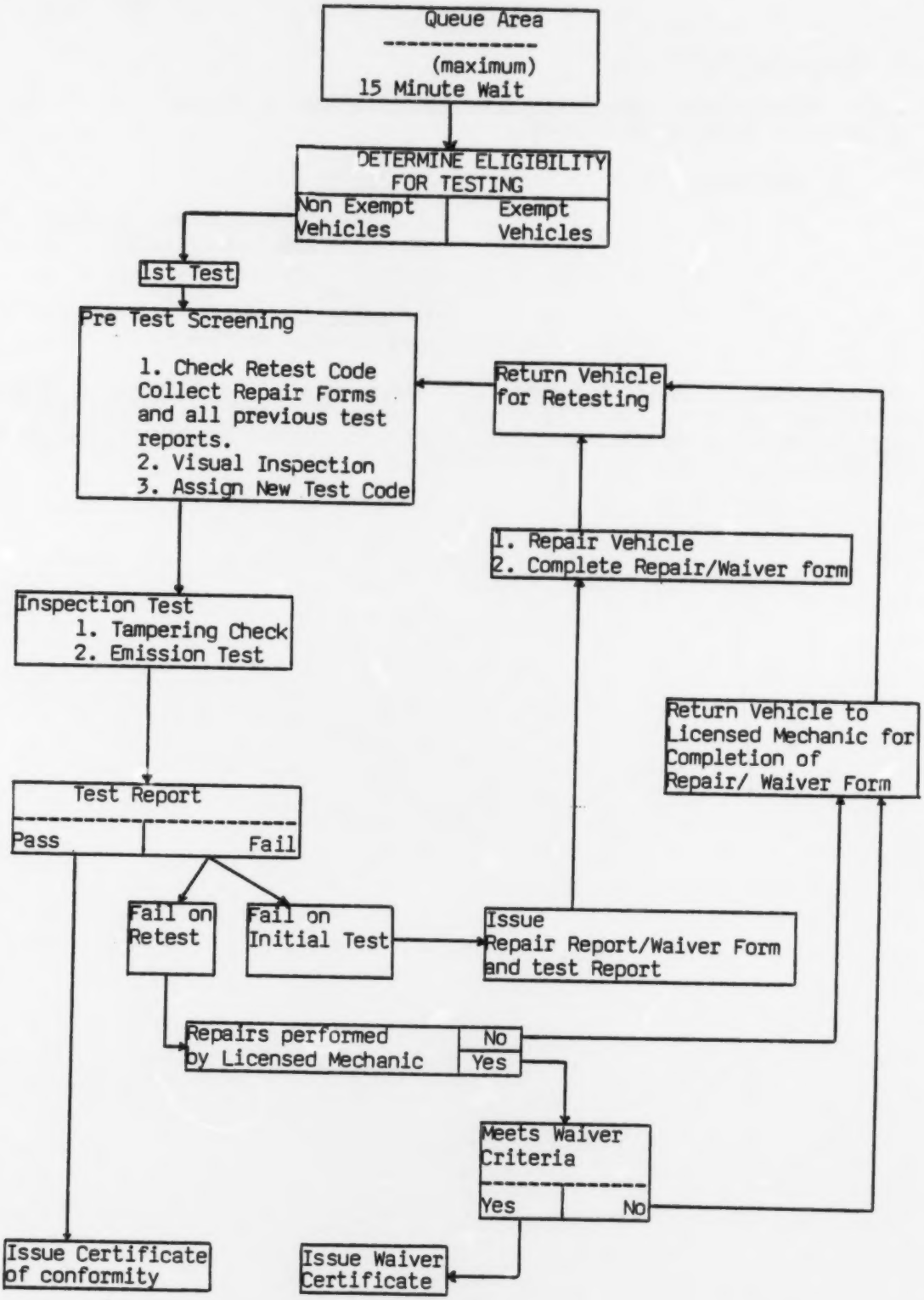

Queue Area
(maximum)
15 Minute Wait
DETERMINE ELIGIBILITY FOR TESTING
Non Exempt Vehicles
Exempt Vehicles
1st Test
Pre Test Screening
1. Check Retest Code Collect Repair Forms and all previous test reports.
2. Visual Inspection
3. Assign New Test Code
Return Vehicle for Retesting
1. Repair Vehicle
2. Complete Repair/Waiver form
Inspection Test
1. Tampering Check
2. Emission Test
Return Vehicle to Licensed Mechanic for Completion of Repair/ Waiver Form
Test Report
Pass
Fail
Fail on Retest
Fail on Initial Test
Issue Repair Report/Waiver Form and test Report
Repairs performed by Licensed Mechanic
No
Yes
Meets Waiver Criteria
Yes
No
Issue Certificate of conformity
Issue Waiver Certificate

Figure VI-1

1. Determination of Eligibility for Testing

a) Exempt Vehicles: All exempt vehicles shall be rejected without testing. No fees shall be collected from the vehicle owner and an appropriate code shall be recorded for each rejected vehicle for use in tabulating the weekly operations report. Exempt vehicles include the following.

1) Any vehicles registered outside the Legislative boundaries or exempt by law (see Appendix A).

2) Motorcycles, vehicles with two-cycle engines, and vehicles powered with fuels other than gasoline (diesel, LPG or LNG).

3) All vehicles with a GVW rating greater than 8500 pounds.

4) Any vehicle with a shipping or title curb weight greater than 6000 pounds.

b) Non-Exempt Vehicles: The bidder shall propose to inspect all non-exempt motor vehicles (including vehicles brought in from out-of-state) undergoing annual registration commencing January 1, 1983, in accordance with the requirements for the emission inspection. Non-exempt vehicles being registered in the area covered by the inspection program for the first time will require inspection.

1) Staggered Registration: For the bidder's information, annual vehicle registration renewal is now on a staggered basis whereby approximately 1/12 of the registrations are renewed each month.

2) Inspection Requirements with OVEIP: Figure 2 shows the steps a motorists must take for the initial registration or the registration renewal. Basically, this depicts the statutory requirements of the Motor Vehicle Code (Appendix B).

2. Pre-Test Inspection Criteria

The contractor shall screen all nonexempt vehicles before allowing those vehicles to procede to the inspection test. Bidders must indicate in their proposal the technique or manner in which they will implement the following prescreening criteria:

a) Check for retest code or status:

1) The motorist must provide the current registration certificate and any previous (last 30 days) test reports and "Repair Report/Waiver" forms. Does the motorist have the proper documentation? Is the documentation consistent and for the correct vehicle?

2) Is this the initial test, first retest, etc.?

3) For retest vehicles, collect any "Repair Report/Waiver" forms and all previous "Test Reports."

4) Check the "Repair Report/Waiver" forms for completeness. Are the "Repair Report/Waiver" and the "Test Report" forms for the vehicle undergoing the inspection?

5) For retest vehicles at facilities with computer Data Base facilities, call up the file on the retest vehicle and enter the repair information (from the Repair Report form) on that file. For systems without extensive data bases, enter all data and print a new form.

b) Visual Safety Inspection: Each vehicle shall be visually inspected prior to the emission test for the following unsafe conditions:

1) Fuel leaks: All fuel leaks in or around engine area, fuel tank or lines to such a degree as to cause wetness or pooling of fuel.

2) Oil leaks: All continuous leaking of engine or transmission oil onto the floor.

3) Coolant leaks: All continuous leaking of engine coolant onto the floor to such a degree that engine overheating has occured or will occur within a short time.

4) Other: All other unsafe conditions such as bulging radiator hose(s), loose fans, loud internal engine noises, and obvious exhaust leaks.

c) All vehicles passing the prescreening criteria (in a) and b) above) shall be assigned a test code status (or retest code) and shall procede to the emission test.

d) All vehicles failing the prescreening criteria (in a) and b) above) shall be rejected until such time the vehicle passes the prescreening criteria. No emissions test shall be performed on a rejected vehicle. Do not collect a fee from vehicles failing the prescreening criteria. Each vehicle and each time the same vehicle fails the prescreening criteria, it shall be reported in the weekly operations report by an appropriate code.

e) Collect the Inspection fee: Collect an inspection fee from each vehicle passing the prescreening criteria before allowing that vehicle to procede to the emission test according to the following:

1) Each year the first emission retest following the initial emission inspection will be provided to the public free of charge. The one free retest shall be incorporated into the fee for the initial test per sections VII and IX.

2) For each subsequent retest the public will be charged a fee (rounded to the nearest $0.50) at the rate of 75 percent of the fee for the initial test.

3. Inspection Test

The inspection test shall consist of five separate tasks as described below. The tasks include a tire pressure check, an emission standard selection process, a cursory tampering check, a pre-test instrument check, and the emission test.

a) Tire Pressure Check and Inflate: Each motorist shall be asked if a check of tire pressure is desired. In addition, each motorist shall be asked if the contractor may correct underinflated tires. If consent is obtained, the tire pressure shall be checked. Inflation of underinflated tires shall be to the vehicle manufacturers' recommended tire pressures. The State may choose to provide standardized pressures in place of the manufacturer specifications at a later date.

b) Selection of Standards:

1) Overview of the process

i) Identify the vehicle

ii) Record the identification data and pre-test data on the proper forms, or enter the data into the computer (if used).

iii) If a computer is used, allow the computer to select the standards; otherwise identify the standards for the vehicle and record them on the form.

iv) If a computer is used, verify that the computer has determined the standards before proceding.

2) Identification Criteria and Pre Test Data. Information marked (AUTO) may be automatically entered by a computer (if used).

i) Date (Auto)
ii) Vehicle license plate number
iii) VIN
iv) Vehicle type (LDV, LDT, HDG, etc.)

v) Vehicle make
vi) Vehicle model
vii) Vehicle Model Year
viii) Odometer
ix) Test Facility I.D. (Auto)
x) Test-Lane Number (Auto)
xi) Facility Inspection Test Number (Auto)
xii) Retest Code (Initial test, first retest, second retest, etc.)
xiii) Spare channels (3)

3) Standards. The State is responsible for determining both the value and the number of standards to be used. The bidder shall assume a minimum of 6 categories of standards (see Table 5). The bidder shall show sufficient planning to allow up to 20 categories at one time. The State shall have complete flexibility to vary the standards values and number of categories (between 0 and 20) at any time. The State shall also have flexibility to adjust the value of the standards for each test mode (i.e. different standards for different modes) at anytime. The contractor may propose or initiate at a later date, subject to State approval, a mechanism that will allow such changes to be made in a uniform, timely, and orderly manner.

4) Applying the Standards. The vehicle inspector shall use the identification data and the following criteria to select the appropriate standards. If a computer is used, it may make the determination:

i) Vehicle Model Year
ii) Type of Vehicle

(a) Light-Duty Vehicle
(b) Light-Duty Truck
(c) Heavy-Duty Gas Truck

iii) Spare Channel (e.g. fuel type)
iv) Spare Channel (e.g. Catalyst - non-catalyst, California - non-California)

c) Tampering Check: Each vehicle shall be checked for obvious tampering of the emission control system. Failure of the tampering check shall constitute failure of the inspection test. The check shall not be proposed as an all inclusive check, rather the bidder shall propose procedures that will allow detection of visual or obvious tampering. The following is offered for guidance:

1) The check should not require more than one minute on the average.

2) The inspector may maintain a library of emission control schematics by vehicle year, make, and model for settling disputes.

3) In a tampering dispute, the vehicle owner may elect to:

i) leave the testing line to seek proof of non tampering (i.e. obtain control system information from an accepted source), and

ii) return to the same inspection facility with documentation within 20 days and continue with the inspection. Such returnees shall not be charged for the completion of the inspection test.

4) Failing the tampering check shall be considered the same as failing the emission check. The motorist will be entitled to a reinspection in the normal manner after repairs. No emission test is permitted on vehicles failing the tampering check.

5) At a minimum the tampering inspection will look for (no removal or disassembly of parts will be required):

i) any obvious loose, cracked, or deteriorated hoses, and

ii) air cleaner assembly intact with hot air duct from the exhaust manifold in place, and

iii) air pump operation (i.e. is the belt on, and does air pump pulley rotate when engine is started?), and

iv) catalyst (i.e. has the catalyst been removed; are there obvious signs of serious structural damage?), and

v) fuel tank restrictor (i.e. has the restrictor that allows only lead free fuel nozzles to fit the fuel tank on catalyst cars been removed; has the "unleaded gasoline only" decal been removed?). The contractor shall use a go/no-go gauge to check the fuel tank restrictor diameter.

vi) The contractor shall provide (for a nominal fee) new "Unleaded Gasoline Only" decals for those vehicles without decals. The decals shall be generally universal and a practical duplicate of OEM decals. Each vehicle for which a decal is required must have a decal in place before proceding to the emission test.

d) Pre Test Instrument Check: The inspector shall insure that the emission inspection analyzer and other test equipment (i.e. tachometer, chassis dynamometer if used, etc.) are operated in compliance with all of the facility QA/QC procedures before inspecting a vehicle.

e) Emission Check: Each vehicle shall be tested for HC and CO emissions on the applicable test sequences. The following general guidelines on procedures and test sequences shall be used.

1) Instrument Procedures.

i) Position the vehicle for the test. The vehicle must be at normal operating temperature with all accessories turned off, the transmission in neutral or park, and on a level surface.

ii) Insert the probe.

iii) Follow the test sequence for the vehicle involved allowing the emissions to stabilize at each test mode.

iv) For each test mode initiate the "sample read" system (manual or computer analyzers, see EPA Report EPA-AA-IMS-80-5-B) as soon as the emissions stabilize or after 30 seconds in the mode to determine the official test values.

v) For dual tailpipe vehicles repeat step iv) for each tailpipe before proceding to the next mode in the test sequence. Either manually or allow a computer to average the values from each tailpipe. The average value is the official value for that mode.

2) Pre-81 Unloaded Test Sequence.

i) After the vehicle is positioned and the probe is inserted, follow the instrument procedures to determine the official test values with the vehicle at an idle.

ii) Compare the official test values with the standards, and determine a pass or fail status. A computer may perform the comparison and the pass or fail determination. If the official test values are below the standards, the vehicle has passed the emission check and is eligible for a "Certificate of Conformity".

iii) If the vehicle fails either the HC or CO standards continue the test with a 2500 RPM mode.

iv) Raise the vehicle hood (if necessary) and attach the tachometer lead.

v) Precondition the vehicle at an engine speed of 2500 RPM (±300 RPM) for 30 seconds.

vi) Allow the vehicle to return to idle and determine the official test values at idle.

vii) Compare the official test values at the second idle mode with the standard and determine pass or fail status. A computer may perform the comparison and the pass or fail determination.

3) Post-80 Unloaded Test Sequence.

i) After the vehicle is positioned and the probe is inserted, raise the hood and attach the tachometer lead.

ii) Determine the official test values at an engine speed of 2500 RPM (±300 RPM).

iii) Allow the vehicle to return to idle and determine the official test values at idle.

iv) Compare the official test values for each mode and determine a pass or fail status for each mode. A computer may perform the comparison and the pass or fail determination. The vehicle must pass the HC and CO standards for both the 2500 RPM mode and the idle mode to obtain a "passing" status.

4. Loaded Test Sequence.

i) If the State exercises the "Loaded Mode" retrofit option, the loaded operation shall be substituted for the 2500 RPM mode in both the Pre-81 and Post-80 test sequences.

ii) The loaded mode to be substituted for the 2500 RPM mode shall be 30 MPH (±1 MPH) with a load of 9 (±1) horsepower at the rolls.

iii) The vehicle shall be operated in the highest gear appropriate for a 30 mph cruise without lugging the engine.

4. Test Report

a) Test Report Criteria: After the inspection test is concluded the contractor shall issue to the motorist a test report containing the following information. It is preferred that the "Test Report", the "Vehicle Repair Report Form", and the "Waiver Form" be combined into one form as indicated later in this section.

1) The "Identification Criteria and Pre-Test Data" collected [See C.3.b)2)].

2) The Criteria used to determine the applicable standards [See C.3.b)4)] and the standards used.

3) The retest code.

4) A tampering inspection statement (pass or fail).

5) A statement indicating a "Valid" or "Void" emission test.

6) Reason(s) for any "Void" tests.

7) Offical test values for HC and CO for each test mode.

8) An overall pass or fail indication as well as for each test mode.

b) "Passed" Vehicles: After the vehicle has passed the inspection, the inspector shall indicate this information to the motorist, and either issue a Certificate of Conformity or direct the motorist to an adjacent administrative office where the Certificate can be obtained. A computer may issue or print the Certificate.

c) "Failed Vehicles": If a vehicle fails the inspection test, the inspector or administrative personal shall inform the motorist of this condition and perform the following:

1) Failure on Initial Test.

i) Issue Test Report to the motorist.
ii) Issue Diagnostic Information to the motorist.
iii) Issue "Repair Report/Waiver Form" to the motorist.

2) Failure on 1st Retest

i) Update the previous test report with the most recent test data and retest code.
ii) Review the "Repair Report/Waiver Form" to identify if sufficient waiver items have been inspected or repaired to qualify the vehicle for a waiver.

iii) Make a determination on whether a waiver is to be granted.

iv) If the vehicle does not qualify for a waiver, inform the motorist of this determination, the reasons for the determination, and return updated "Test Report" and "Repair Report/Waiver Form" to the motorist, or issue a new updated Report and Form to the motorist. Also reissue the Diagnostic Information.

v) If the vehicle qualifies for a waiver, either issue a "Waiver Certificate" or direct the motorist to an adjacent administrative office where the Certificate can be obtained.

3) Failure on Subsequent Retests. The procedure for subsequent retests shall incorporate the guidelines for "Failure on the 1st Retest".

5. Diagnostic Statements

a) Each vehicle which fails the emission portion of the vehicle inspection shall receive the list of diagnostic information (Table 3) with the emission "Test Report. This information can be used by the repair mechanic as a guide to efficient cost-effective repair of those problems which may cause high emissions.

b) The contractor may combine the list of diagnostic information with the emission test report printed by the automated emission testing system into a single form containing all the information described in Table 3 and in the "Test Report."

6. Legal Proof of Conformity

a) The owner of each vehicle whose test report indicates conformity with the appropriate standards for that vehicle model year shall be provided with a certificate of conformity which shall be legal proof

that the vehicle has met the requirements of the laws regarding vehicle emission inspection. This certificate will contain, at a minimum, the date of the test and the vehicle license number to uniquely identify the vehicle in compliance.

b) If the contractor prefers, the certificate of conformity and the test report printed by an automated emission testing system may be combined into a single form which contains the information required in the "Test Report". Vehicles which fail the standards of compliance must be clearly marked as such on any combined form so that such a form cannot be used as legal proof of compliance.

D. Waiver Criteria

The contractor shall be responsible (with State oversight) for making waiver determinations. The following criteria shall apply in waiver issues and the bidder shall propose means of implementing the requirements.

1. Eligibility for Waiver

Each vehicle which has failed its initial inspection and at least one reinspection, and whose latest test report indicates failure to pass the appropriate standards of compliance for that vehicle's model year, but indicates passing of the tampering check, may be eligible for a waiver. The granting of a waiver shall be based on the waiver criteria.

2. Waiver Criteria

A vehicle shall be granted a waiver if:

Criterion 1: The vehicle has failed to meet the appropriate standards of compliance for HC and CO emissions on its initial test and at least one reinspection after maintenance, but has passed the tampering check. And,

Criterion 2: For all 1981 model year and later vehicles whose mileage is less than 50,000 miles and whose age is less than 5 years, the vehicle operator presents a signed statement from an appropriate new car dealership stating that the vehicle is not eligible for emission control system warranty work. And,

Criterion 3: A licensed mechanic has diagnosed and attempted to repair the vehicle to pass reinspection. And,

Criterion 4: The licensed mechanic has followed the standard repair list preprinted on the waiver application form (Table 6). The idle mixture adjustment and spark timing adjustment has been marked as "OK" (diagnosed as not needing repair) or as "Repaired." All other items on the list must also have been marked in one of these two ways, except that if the actual expenditure for the diagnosis and repairs for items already checked has reached $75 for 1980 and earlier model year vehicles or $100 for 1981 and later model year vehicles then remaining items (other than idle mixture and spark timing adjustments) may be checked as "Needs Repair" or "Undiagnosed." And,

Criterion 5: If the actual expenditure for the diagnosis and repairs for all items on the standard repair list has not reached $75 for 1980 and earlier model year vehicles or $100 for 1981 and later model year vehicles, the licensed mechanic has attempted to diagnose and perform other repairs necessary to bring the vehicle into compliance. In this attempt, the licensed mechanic must diagnose and perform all other necessary repairs until one of the following happens: (1) the actual expenditure for diagnosis and repair of the items on the standard repair list and other repairs necessary to bring the vehicle into compliance has reached $75 for 1980 and earlier model year vehicles or $100 for 1981 and later model year vehicles, or (2) the only diagnosed problems which have not been repaired are ones exempted by the state. The exempt repairs shall initially (subject to change by the state) be as follows:

(i) repairs which require access to the combustion chamber

(ii) repairs which require complete replacement of the carburetor(s). Repair or replacement of auxilliary carburetor devices (i.e., vacuum breaks, solenoids, etc.) or internal carburetor parts (i.e., floats, accelerator pumps, metering solenoids, gaskets, diaphragms, etc.) are not exempt repairs.

The licensed mechanic must describe on the waiver justification form the diagnoses and repairs made to satisfy this criterion. And,

Criterion 6: The mechanic has properly completed all parts of the repair report form. And,

Criterion 7: The repair report form has been signed by the repair mechanic and marked with the identification number of the repair garage employing him/her.

3. Waivers Following Repairs by Persons other than Licensed Mechanics

It is not a legal requirement that all persons repairing vehicles which have failed inspection, whether for compensation or not, be licensed by the state. A state licensing is necessary only for completing and signing waiver justification forms or Waiver Application form (see Table 6).

In cases in which a person other than a licensed mechanic (including cases of owner repair) has attempted to repair a vehicle at least once and the vehicle operator must obtain the signature of a licensed mechanic on a waiver justification form or Waiver Application form (see Table 6).

This licensed mechanic must follow the standard repair list and attempt to diagnose and perform other repairs necessary to bring the vehicle into compliance just as he or she would if the vehicle were being presented for repair without the earlier repair attempt by the non-licensed mechanic, with one exception. The repair cost limit which would otherwise apply ($75 or $100 depending on model year) shall be reduced by the expenditure for certain parts replaced during the earlier repair attempt. Earlier parts expenditures may be credited to the cost limit only if the motorist presents to the licensed mechanic a legible and itemized receipt for the parts replaced. The receipt must have a legible date and the date must indicate purchase of the parts after the date of the initial test. Earlier expenditures may be credited only for the following parts:

HC Failure	CO Failure
Spark Plugs	Air Filter
Ignition Wires	PCV Valve
Distributor Cap	PCV Filter
Distributor Rotor	Air Pump Belt
Points (if applicable)	Exhaust Gas Oxygen Sensor (if applicable)
Condenser (if applicable)	

The licensed mechanic shall be responsible for examining receipts for such parts and determining which costs are eligible to be credited towards the cost limit. The eligible total cost must be indicated on the waiver justification form.

The licensed mechanic must in all cases diagnose and adjust as necessary the idle mixture setting and spark timing setting.

The motorist must retain the receipts for earlier parts expenditures and present them when requesting the waiver, if demanded.

4. Contractor Duties in Reviewing Waiver Documentation

The contractor's duties in reviewing waiver requests shall consist of the following, plus ancillary duties proposed by the contractor:

a) Determine whether the vehicle has passed the tampering check. If not, no waiver shall be issued.

b) Determine whether the vehicle is a 1981 or later model year vehicle, has less than 50,000 miles on the odometer, and is less than 5 years old. For vehicles for which the model year is not definitive as to whether the vehicle is less than 5 years old (e.g., a 1981 vehicle being inspected on June 1, 1986) the contractor shall assume the vehicle is less than five years old. If the vehicle meets all

three conditions, the contractor will determine whether the motorist has a signed statement from an appropriate new car dealership stating that the vehicle is not eligible for emission control system warranty work. The State will distribute a standard form for this purpose, but its use is not essential. The statement must be dated after the vehicle failed its initial inspection and must identify the vehicle and the dealership. If the motorist has an acceptable statement, it shall be collected and delivered to the State and the Contractor shall proceed with the remainder of its waiver duties as described below. If the motorist does not have an acceptable statement, no waiver shall be issued.

c) Verify that the repair and waiver documentation presented by the motorist is completely filled out and that the documents indicate that the waiver criteria have been met. The contractor shall also verify that the Repair Garage Identification Number is legible.

d) If waiver criteria have all been met, issue the legal proof of waiver.

e) If a waiver has been requested but not all criteria have been met, explain to the motorist what criteria are unmet and how they can be met. The State will provide printed explanations of the waiver process and criteria which the contractor must distribute to motorists who are denied a waiver.

5. Legal Proof of Waiver

a) The owner of each vehicle granted a waiver shall receive a certificate of waiver which shall be legal proof of compliance with the laws regarding vehicle emission inspection. Each valid certificate of waiver shall contain, at a minimum, the date of the test and the vehicle's license number to uniquely identify the vehicle to be waived.

b) If the contractor prefers, the certificate of waiver and the test report printed by an automated emission testing system may be combined into a single form containing all the information required in the "Test Report". Vehicles which are not eligible for waiver must be clearly marked as such on any combined form so that such a form cannot be used as legal proof of waiver.

E. Reports

1. Inspection Reports

The contractor shall be responsible for developing and providing all reports and forms related to the inspection test.

a) The contractor must submit all forms to the State Representative for approval prior to use of the form.

b) The contractor may propose or initiate at a later date, subject to State approval, a mechanism that will allow initiation, modification, or withdrawal of forms and reports in a uniform, timely, and orderly manner.

c) As a minimum the contractor shall prepare the following reports/ forms.

1) Test Report: The test report shall comply with the requirements of Subsection V.C.4., and may be combined with a "Repair Report/Waiver" form. See Table 6 for an example.

2) Tamper Check Form: The tamper check form to assist the inspector shall comply with the requirements of Subsection VI.C.3.c.), and may be combined with other forms.

3) Repair Report:

i) The "Repair Report" form shall contain the list of repair type codes described in Table 4 with boxes and instructions to the repair mechanic to indicate the type of repairs performed. Space shall be provided for description of diagnosis and repairs performed not included in the list. In addition, the repair mechanic shall be instructed to indicate in appropriate spaces on the form the vehicle model year, vehicle license plate, repair parts cost, repair labor cost, the repair garage identification number, and the repair mechanics signature. The test report described in section VI.C.4. shall be fastened to (staple, tape, glue, etc.) or printed in the Repair Report form.

ii) The "Repair Report" may be combined into a "Repair Report/Waiver" form as illustrated in Table 6.

4) Waiver Form: The waiver form shall comply with the Waiver Criteria in Subsection V.D. and specifically the repair criteria in Subsection VI.D.4.a) and in Table 6. The waiver form may be combined into a "Repair Report/Waiver" form as illustrated in Table 6.

5) Certificates: Certificates of Conformity and Waiver shall comply with the requirement in Section VI.

2. Reports to the State

a) Weekly Reports: Commencing with the beginning of operation of the first facility, the contractor will be required to submit weekly reports containing the number of transactions, inspection results, and vehicle repairs. The data shall be in machine readable form and shall be coded in a manner that will allow further processing and analysis by the State. The contractor may propose data formats or may initiate formats at a later date (subject to State approval) as well as propose or initiate a mechanism (also subject to State approval) that will allow changes (additions, withdrawals, modifications, etc.) to occur in a uniform, timely, and orderly manner.

1) Weekly Transactions.

i) The contractor will be required to submit weekly reports, by inspection facility, and within inspection facility by inspection lane showing the following:

(1) Total vehicles received into the lane or facility.

(2) Total vehicles rejected from testing for safety reasons.

(3) Total vehicles not tested because of being exempt under State law.

(4) Total initial inspections made.

(5) Total vehicles passing initial inspection and receiving certificate of compliance.

(6) Total vehicles failing initial inspection.

(7) Total reinspections made.

(8) Total vehicles passing reinspection and receiving certificate of compliance.

(9) Total vehicles receiving waiver upon failing reinspection.

(10) Total vehicles failing reinspection but not issued waiver.

(11) Total lane or facility down-time.

ii) Totals (1), (2), (3), (5), (6), (8), (9), and (10) shall be determined by actual count of individual vehicles and not from other Totals by subtraction or addition. The weekly report shall explain any failure of Totals (2), (3), (4), and (7) to sum to Total(1).

2) Inspection Results. The contractor will be required to submit on a weekly basis the "Test Reports" and "Tamper Check Forms" collected on each vehicle tested during the previous week.

3) Vehicle Repair Data.

i) All completed "Repair Report/Waiver" forms collected by the contractor will be submitted to the State each week. In addition, information from at least 10% of the collected completed repair report forms will be coded by the contractor and submitted to the State in a machine readable form.

ii) The retest code shall indicate the number of reinspections which have been performed on the vehicle prior to repair. Vehicles which have only received an initial inspection will be coded as zero.

iii) The repair type codes shall match the codes listed in Table 4. A repair type code shall be recorded for each repair indicated on the vehicle repair report form.

iv) If the contractor wishes, the vehicle "Repair Report/ Waiver" data may be collected and recorded for each vehicle receiving a reinspection. The data may then be submitted in a machine readable form along with the vehicle "Inspection Results" (item 2) above) to the State each week.

b) Operational Status Reports: The contractor shall maintain data on the operational status of each facility. Summaries of the data (or all of the data) may be in machine readable language. The State may at any time request the current status, or to inspect current or past data on the status of the network and of each facility within the network. Items that must be available for inspection are:

1) Daily log listing.

i) Equipment status
ii) Results of all calibrations and cross checks
iii) Lane status
iv) Corrective or repair actions taken, if any

v) Down-time, if any
vi) Total tests performed in each lane
vii) Aborted tests including time of day and reason
viii) Ambient CO

2) Monthly Records.

i) of all required scheduled maintenance.

ii) of person-hours expended in scheduled maintenance.

iii) of corrective (non-scheduled) maintenance performed and person-hours expended.

3) QA/QC data.

F. QA/QC Requirements for Inspection Testing

The purpose of the QA/QC program is to insure valid data is obtained and to assure uniformity between and within facilities. Valid data is defined as measuring the true emission levels in the vehicle tailpipe correctly. The bidder shall propose the general means by which the following contractual requirements will be met:

1. The contractor is responsible for proposing and implementing a QA/QC program that will provide and maintain valid emission test data and valid monitoring of the ppm-hours of CO exposure.

2. The QA/QC program shall consider the sources of error discussed in "Analysis of the Emission Inspection Analyzer" (EPA technical report No. EPA-AA-IMS-80-5-A) as well as any other error sources and the contractor shall implement equipment and operating procedures dictated by the QA/QC considerations.

3. The QA/QC program shall embody a preventative maintenance program.

4. Standard Operating Procedures implemented by the QA/QC shall include as a minimum:

a) HC hang-up checking procedures before and after each test.

b) Hourly electronic span procedures for the emission analyzers.

c) Daily and mid-day gas span check procedures for the emission analyzer.

d) Daily visual inspection of all equipment.

e) Daily warm-up procedures for all test equipment (i.e. analyzers, dynamometers, etc.).

f) Daily leak check procedures.

g) Daily check of dynamometer power setting (if used).

h) Monthly multi-point calibration checks (6 bottles per range), response time, and interference checks.

i) Monthly gas checks of CO exposure analyzers.

j) Periodic cleaning and maintenance of all equipment per EPA-AA-IMS-80-5-A, EPA-A-IMS-80-5-B, or manufacturers instructions.

5. The QA/QC program shall include means (possibly a "repeatable" vehicle(s)) that will allow evaluation of each lane's ability to correctly determine the true emission value of a vehicle. The means developed must allow comparisons between lanes at one facility as well as comparisons between each facility.

6. The QA/QC program shall have an "oversight" mechanism that allows evaluation of trends in individual analyzers, test lanes, facilities, etc. Such trend analyses shall be used as a maintenance criteria, and as a means to review, update, and improve standard operating procedures. The State may request trend analysis information as part of the "Operational Status Report" [see Subsection VI.E.2.b)].

7. The contractor may propose or initiate at a later date, subject to State approval, a mechanism that will allow initiation, modifications or withdrawl of any aspect of the QA/QC program for the purpose of improving or streamlining the program, or to meet changing needs. The mechanism shall provide for changes in a uniform, timely, and orderly manner. Any QA/QC change shall not be initiated without prior approval from the State Representative.

8. Reliability Requirements

a) Facility Reliability: The QA/QC program shall insure that unscheduled repairs shall not result in facility down-time in excess of one hour for any single event nor a total of four hours in any week, nor in lane down-time in excess of 24 hours for any single event or a total of 24 hours in any week. The contractor is responsible to insure that the reliability requirements are met.

b) Inspection Lane Reliability: The QA/QC program shall insure that unscheduled repairs in any lane resulting in down-time shall not cause the waiting period in the queing area to exceed 15 minutes.

c) Contractor Penalties for Down-Time: The penalty to the contractor for exceeding the 15 minute wait time shall be based on the following for each facility:

1) Identify the length of the wait time exceeding 15 minutes expressed as hours to (XX.XXX).

2) Identify the number of lanes down.

3) Identify the maximum hourly inspection rate (output rate) for each lane.

4) Compute the number of vehicles that could be tested in each downed lane by multiplying the down time for each lane by the maximum test rate per each lane.

5) Sum the number of vehicles that could be tested in all of the downed lanes.

6) The penalty to the contractor shall be equal to twice the contractor's fee or profit that would be due to testing the number of vehicles identified in step 5).

G. State Access to Facilities

The State will conduct a continous program of surveillance to verify that the contractor is performing emissions tests using properly calibrated and correctly functioning equipment. In order to facilitate this surveillance, the cooperation of the contractor is required. Therefore, the bidder's proposal shall address the method of complying with the following requirements:

1. Any facility shall be available at any reasonable time, upon no advance notice, for a check of the calibration and proper operation of all equipment.

2. Any documentation necessary to perform calibration checks shall be available at each facility.

3. With reasonable notice, access shall be available during nonworking hours to perform any checks that the contractor or the State does not wish to perform during normal work hours.

4. Any defective condition that would adversely affect the accuracy of tests performed shall be corrected immediately, so that the down-time requirements of paragraph VI.F.8. are met.

5. If so ordered by the State Representative, a test lane affected by such a defective condition shall be closed, and no further testing shall be conducted until objective evidence that the defective condition has been corrected and has been approved by the State Representative.

H. Pre-Acceptance Contract Requirements

After the contract is awarded, the contractor will be required to provide information to the State before initiation of the inspection program. Therefore, bidders must include the following in their proposal:

1. Progress Reports

In order to facilitate the State's review of contract status, the contractor will be required to submit monthly detailed progress reports during the design and implementation phases of the contract. These progress reports shall outline the contractor's activities for the month previous, any delays or anticipated delays, problems, differences of interpretation and resolution of any past problems.

The progress reports shall be considered one continuous document and will contain cross-reference to earlier reports in order to reduce the volume and complexity of each report. At the conclusion of the implementation period, the contractor will submit a summary report and table of contents for the entire progress report document.

2. Pre Construction Requirements

In order that the State can be assured that the contractor is proceeding to design and implement a viable inspection program on schedule, the contractor will be required to submit detailed schedules on each aspect of design and construction identified in Section V.E. of the facility network.

3. In-Process Quality Assurance

a) The contractor will establish and maintain a quality-assurance program to ensure compliance with the requirements of the contract.

b) All phases of the work manufactured or performed within the contractor's plant or at any other source, shall be controlled at all points necessary to ensure conformance to the contract. The program shall provide for the prevention and ready detection of discrepancies and for timely and positive corrective action. The contractor shall make objective evidence of quality conformance available to the State Representative.

c) The authority and responsibility of those in charge of design, production, testing, and inspection of quality control shall be clearly stated, as required in subsection VIII.B.

4. In-Process Inspection

a) The contractor shall establish and maintain a system of in process inspection during the manufacture, construction, and installation to ensure the quality and serviceability of all system components and subsystems.

b) The State Representative shall have access to and may inspect materials and equipment to be incorporated in the system at mutually agreed upon times at the place of production or manufacturer, and at the shipping point, as well as at the site of the work.

c) The contractor's materials and equipment contracts shall include a notice to the supplier or subcontractor of these inprocess inspection requirements.

d) A record of all in-process inspections performed by the contractor and his subcontractors and suppliers shall be maintained by the contractor and shall be available for review by the State Representative at any time during the period of contract performance. Such record shall include but is not limited to, applicable components and subsystems performance specifications and the test records of each tested item.

e) All of the construction and installation work performed shall be subject to inspection by the State Representative for conformity with the drawings and specifications.

f) The contractor shall furnish the State Representative all reasonable facilities for his safety in inspecting the work at all times and at all places where inspection may take place.

g) Neither the inspection nor lack of inspection of any portion of the work, nor the presence or absence of the State Representative during performance of any of the work shall waive any of the requirements of the contract or relieve the contractor of any obligations thereunder. Defective work, materials, and equipment may be rejected notwithstanding their prior inspection or lack of inspection by the State Representative and nothwithstanding their conformance with the contract at the time of any prior inspection.

h) Any work, materials, or equipment not conforming to the specifications and drawings may be rejected by the State Representative and shall be corrected by the contractor.

5. System Acceptance

a) The contractor shall submit a draft of a detailed Acceptance Test Procedure. Such procedure shall be consistent with the Operation Manuals and the requirements in the contract. The State will review and approve or indicate required changes in the Acceptance Test Procedure.

b) Upon the completion of each inspection facility, the contractor shall demonstrate its readiness. The contractor shall conduct the specified inspections and acceptance tests in the presence of the State Representative in accordance with the approved Acceptance Test Procedure.

Section VII - Administrative Conditions

A. Remuneration of the Contractor

1. Fee Collection

The contractor will collect all inspection fees from motorists at the time and place of inspection.

Each vehicle failing the inspection may receive one free reinspection, but only upon presentation of the vehicle inspection report from its prior inspection, and an indication that necessary repairs have been performed. If subsequent reinspections are necessary, the motorist must again pay the inspection fee as outlined in subsection C.2.e). Proposals must address the problems of accounting and security posed by collection of fees by the contractor at the inspection facility.

2. Calculation of Contractor's Share

1,500,000 vehicles in the counties governed by the program are projected to be subject to the inspection requirement in 1983. Table 1 identifies their distribution by county. Program planners estimate a 30% initial failure rate and a 30% rate of failure of reinspection, yielding to an estimated total of 2,085,000 inspections for the first year of the mandatory program. Projections beyond 1983 have not been made in this RFP.

3. The state of Smogonia estimates a minimum of 1,200,000 total inspections for 1983. Reinspections as well as initial inspections performed by the contractor will be compensated by the State and will be included in the calculation of the minimum number. Additional inspections are to be compensated on a declining-scale fee per test, to be proposed by the bidder. The estimated minimum number of inspections to be purchased by the state for each year of the contract is as follows:

1984 - 1,260,000
1985 - 1,320,000
1986 - 1,380,000
1987 - 1,450,000

4. Disbursement to Contractor

The contractor will be expected to deliver all collected fees to the designated state agency, on a weekly basis, accompanied by a detailed accounting of the number of inspections and reinspections performed at each facility for that week. The contractor will receive one twelfth of the estimated minimum compensation each month. Once the estimated minimum number of inspections has been surpassed, the contractor will receive monthly compensation on the per-fee scale applying to the number of additional tests performed so far that year.

5. Voluntary Phase-in Period: Motorists will not be charged for inspections they receive before January 1, 1983. The contractor may be compensated monthly for such voluntary inspections on a straight pertest or overall fee basis, within 30 calendar days after submitting an invoice and detailed accounting of the number of inspections performed at each facility. Proposals should separately address the costs of phase-in period inspections. Only number of tests and pass/fail status need to be recorded during the voluntary phase. Detailed test data is not required.

B. Public Information Activities

An effective public information program is essential to the success of the motor vehicle inspection program. Public information activities may be conducted by the State, or by the contractor or separate special-purpose contractors, subject to the approval of the State of each activity. Proposals in response to this RFP should include a plan and budget for such activities on the part of the contractor as use of television, radio and print media, seminars for the public and for auto mechanics, handling of complaints or inquiries from the public, operation of a telephone "hotline," special promotional events or demonstrations, and voluntary phase-in period inspections. The timing and rationale of planned activities should be indicated in such plans.

C. Auditing of Program Records

The state will have the right to audit the contractor's records and record-keeping procedures to ascertain the number of tests performed by the contractor for which compensation is required, and the proper collection, accounting, and forwarding to the State of fees from motorists. The contractor will be required to furnish copies of relevant reports, financial statements, and other information reasonably necessary to such audits. The state will provide the contractor reasonable notice of such audits and adequate time to respond to inquiries regarding audit discrepencies.

D. Minor Failures of Performance

The contract will prescribe liquidated damages for certain identifiable failures of the contractor to meet the terms of the contract. Such liquidated damages will not be penal in nature, but will attempt to reasonably approximate actual damages to the state which are difficult to calculate, caused by the contractor's breaches. Proposals must include a list of such identifiable breaches with proposed fair liquidated damages for each. The list must include at least the following:

1. Failure of contractor to comply with a legitimate order of an authorized state offical to suspend operation of a test lane.

2. Performance of tests with a faulty or improperly calibrated analysis instrument.

3. Hazardous conditions resulting from, or excessive delay in, test queues.

E. Expropriation or Replacement of the Contractor

The state will reserve the right to expropriate or replace the contractor in any or all aspects of management or operation of the inspection program at any time following January 1, 1983. Expropriation of the contractor would result from the repeal of all or the pertinent part of statutory authority for the program. Replacement will be permitted when found necessary for the protection of the public trust held by the inspection program operator, by an interagency task force appointed by the State Legislature to investigate that necessity. In either event, the contractor will receive fair compensation for the following actual damages:

1. Losses the contractor has incurred through default on leases for land, buildings, equipment or other property for purposes of performance of the program contract;

2. Losses the contractor has incurred through default on contracts of employment for purposes of performance of the program contract, including but not limited to obligations for relocation expenses, severance pay, and other employee benefits;

3. Overhead and other indirect costs incurred by the contractor in good faith efforts to mitigate losses on lease or employment contracts.

4. Reasonable costs of materials purchased by the contractor for purposes of contract performance which cannot be recovered by resale. Such materials may include, but are not limited to land, buildings, equipment, tools and supplies, regardless of whether such materials are in the possession of the contractor or have not yet been delivered to it;

5. Actual costs of removing for purposes of resale materials covered under Section VII.E.

The contractor will also receive a fair compensation for the portion of reasonable return on its investment prevented by premature termination of the contract. Proposals should include an estimation of the overall amount of such return on investments.

The state will notify the contractor at least six months prior to such premature termination of the contract. The contractor will be obligated to take all reasonable efforts to mitigate damages. The State will be entitled to audit the contractor's books and records to verify any damages claimed. Damages paid to the contractors under conditions of premature termination will not relieve the State of other obligations to pay the contractor for services performed in fulfillment of the contract.

F. Performance Bonds

The contractor must furnish, concurrently with signing the contract, a payment bond equal to 50% of the construction costs under the contract and a performance bond in an amount equal to 50% of the remaining amount of the contract, excluding construction costs. Such bonds must be executed by the contractor and a corporate surety approved by the State. Bonds will be renewed annually, as appropriate.

G. Contractor's Idemnification of the State

The contractor must indemnify the State and its agents against any claims on injuries or losses caused to third parties by the contractor's negligence in performing its obligations under the contract. The contractor must defend against, and pay any court costs or attorney's fees charged in connection with any such claims against the State or with agents. The contractor must satisfy any judgments against the State on such claims at its own expense. No insurance protection obtained by the contractor to so indemnify the State may have the effect of limiting the contractor's responsibility to the State in this regard.

H. Contractor Liability

The acceptance or approval by the State of any order or procedure, method, structure or equipment submitted or employed by the contractor will not in any manner relieve the contractor of any liability pertaining to that order or procedure, method, structure or equipment.

The contractor must provide his own liability insurance. The State does not assume liability for the actions or omissions of the contractor.

I. Conformity to Codes

The contractor must conform to all applicable Federal, State and local government code requirements including, but not limited to, employment, building safety and fire codes, and public building requirements for use by the handicapped.

J. Equal Opportunity Practices

The contractor must provide equal opportunity to all persons without regard to race, religion, ethnic background, or sex, in all matters concerning employment, salary, promotion, transfer, recruitment, layoff, and selection for training, related to performance of the contract.

K. Conflict of Interest

1. The contractor and all sub-contractors will be subject to the highest standard of fiduciary duty to the State in the conduct of the inspection program. The contractor must perform all functions of the inspection program in full accordance with the procedures and rules set by the state and by the terms of the contract.

2. Neither the contractor nor any other private concern operating any portion of the inspection program may have any financial interest in any automotive repairs enterprise located within the geographic area subject to the program.

3. The contractor must strictly avoid communication of any false, inaccurate or misleading information to any person or in any certificate, record or document held or submitted to or on behalf of the program authority, regarding the inspection program, its standards, procedures, or requirements, or any determination made or function performed under it.

Section VIII - Bidder Qualification

A. Financial Capability

Each bidder must submit financial or corporate records documenting its financial capability to commence and operate the vehicle inspection program described in this RFP. The documentation must be in a form allowing a certified public accountant to readily determine the bidder's financial capability.

B. Organization and Manpower

Each bidder must provide a management plan of the organization and manpower to be assigned to the program, including a brief description of the qualifications of key personnel and the proportions of their time to be allocated to this program.

C. Program Schedule

Each bidder must submit a detailed, time-phased management planning chart of all tasks to be performed under Section IV.A., using PERT/CPM or an equivalent charting technique, and corresponding to the schedule set in Section IV.B.

D. Identification of Subcontractors

Each bidder must identify all construction and equipment subcontractors and outside consultants it intends to employ for purposes of this program, and must describe their qualifications and the proportions of time and money to be allocated to work they are to perform.

E. Contractor's Support Facilities

Each bidder must provide a description of its plant equipment, support facilities, or other physical assets which would contribute to and are available for this program.

F. Related Experience

Each bidder must provide a list of similar activities it has performed, such as vehicle inspection or air pollution monitoring projects. Sample reports or design studies should be attached, if possible, and will be held confidentially by the State.

G. Evaluation Guidelines

1. An interdepartmental evaluation team will compare the relative merits of all proposals in response to this RFP in terms of fair and objective guidelines. Members of the team will have technical expertise in a variety of areas including site acquisition, construction, operations, contract administration, legal interpretation and vehicle inspection procedures and equipment. It will score each section of the proposals along the lines of the specific requests in this RFP, according to the point system set forth in Table 2.

2. If the bidder has suggested alternatives backed with technical justification, the team will consider these as well in scoring the bidder's response to a specific requirement. Scores for each requirement will be assigned by comparison among all the proposals on that issue. A score of zero will be assigned for each issue to which the bidder does not respond.

Section IX - Cost Proposal

Each bidder must submit a cost proposal separate from the technical proposal.

A. Inspection Fee

Each bidder must propose a flat inspection fee to cover the estimated minimum number of inspections the state plans to purchase for each of the five years of the program beginning January 1, 1983. These estimated minima are set forth in section VII.A. Separate proposals should be made for each of these two potential inspection regimes:

(1) Idle mode only.
(2) Idle mode convertible to loaded mode at a later date.

B. Declining Fee Scale for Additional Inspections

Each bidder must propose a per-test fee scale which declines as the number increases of inspections performed in addition to the estimated minimum. The additional per-test fee proposal should be organized by year and test mode, as is the proposal for the estimated minimum fee. The state estimates approximately 2,085,000 inspections for the first year of the program; but proposals should account for the possibility of a good many more inspections than the projected number. Bidders should take care to avoid any formula which would provide for a negative marginal fee per inspection at any point. A formula which provides a given per-test fee for the first block of additional inspections, and declining fees for each block of additional inspections thereafter, would be preferable, since it would allow the State to calculate the current compensation due to the contractor on a monthly basis with no delay, after the annual minimum has been surpassed.

C. Costs for Voluntary Inspections During Phase-in Period

The state intends to allow motorists to obtain vehicle emissions inspections free of charge during the six months preceding the imposition of the inspection requirement. Bidders may propose a flat overall fee for the provision of an unlimited number of tests during this period, or may propose a straight per-test compensation, or both, as alternatives.

D. Public Information Activities Budget

Each bidder must propose a budget corresponding to the plan for public information activities it proposes under section VII.B.

Figure 1
Legislative Boundaries
(To be supplied by the State)

Figure 2
Registration Renewal Procedure
(To be supplied by the State)

Table 1
BASIC PROPOSAL GUIDELINES FOR
NUMBER OF VEHICLE INSPECTIONS

(To be supplied by the State)

County	Initial Inspections	First Reinspection[1]	Subsequent Reinspection[2]	Total
Biltmore	500,000	150,000	45,000	695,000
Safari	250,000	75,000	22,500	347,500
Mountain	300,000	90,000	27,000	417,000
Granada	450,000	135,000	40,500	625,500
TOTAL	1,500,000	450,000	135,000	2,085,000

(1) 30% failure rate at initial inspection.
(2) 30% failure rate at first reinspection.

TABLE 2
SUMMARY OF BIDDER RESPONSE REQUIREMENTS
PROPOSAL EVALUATION WEIGHTING CRITERIA

RFP Section		Weighting Factor
V	Equipment Specifications	19
B.	OVEIP Network Requirements	6
C.	OVEIP Site and Facility Requirements	4
D.	Equipment Requirements	5
E.	Documentation Procedures	2
F.	Warranty Requirements	2
VI	Operating Requirements	26
B.	Facility Operations	4
C.	Inspection Procedures	5
D.	Waiver Criteria	2
E.	Reports	4
F.	QA/QC Requirements for Inspection Testing	7
G.	State Access to Facilities	2
H.	Pre-Acceptance Contract Requirements	2
VII	Administrative Conditions	15
A.	Renumeration of the Contractor	3
B.	Public Information Activities	8
C.	Expropriation or Replacement of the Contractor	4
VIII	Bidder Qualifications	18
A.	Organization and Manpower	4
B.	Program Schedule	3
C.	Identification Subcontractor	2
D.	Contractor's Support Facilities	2
E.	Related Experience	7
IX	Cost Proposal	22
A.	Inspection Fee	10
B.	Declining Fee Scale for Additional Inspections	6
C.	Costs for Voluntary Inspections During Phase-in Period	3
D.	Public Information Activities Budget	3

Table 3
Diagnostic Statements

For each emission problem condition, perform the checks and maintenance in the sequence as listed until the idle measurements for both HC and CO are sufficiently below the idle emission standards to assure passing a reinspection.

Condition: Fail Both Idle HC and Idle CO.

Begin with the maintenance described to correct the idle HC problem. When the idle HC measurement is acceptable, begin performing maintenance described to correct idle CO problems as necessary.

Condition: Fail Idle HC.

1. Improper Ignition Timing: Compare with manufacturers specification.

2. Faulty Ignition or Misfire: Check for arcing or disconnected wiring.

3. Vacuum Leaks: Check for damaged, missing, or disconnected hoses and check for leaks around the intake manifold and base on the carburetor.

4. EGR System Incorrectly Operating at Idle: Check for proper valve operation.

5. Idle Speed Set Too Low: Compare with manufacturers specification.

6. Air/Fuel Mixture Set Too Lean: Check or set using manufacturers specified procedures. Check the balance in two and four barrel carburetors.

7. Worn Piston Rings or Values: Perform compression check.

Condition: Fail Idle CO.

Diagnosis: 1. Dirty Air Filter: Clean or replace if necessary.

2. Choke Stuck: Check for proper operation and adjustment.

3. PCV System Plugged: Check valve and hoses for restriction.

4. Air Pump and Control Valve Inoperative: Check belt, bypass valve, hoses, etc.

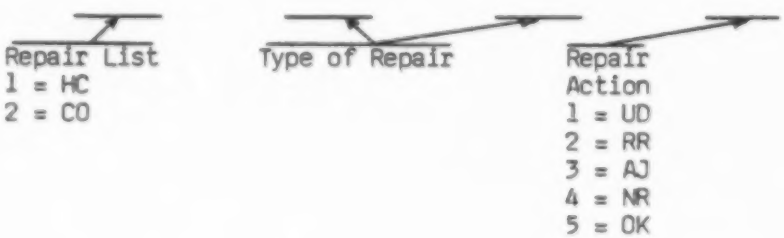
5. Idle Speed Set Too Low: Compare with manufacturers specification.

6. Air/Fuel Mixture Set Too Rich: Check or set using manufacturers specified procedures.

Table 4.
REPAIR CODES

The repair codes use a four numeral matrix identifier for the types of repairs listed in Table 6. The first number of the code identifies which repair list, (1 = HC list, 2 = CO list). The second and third numbers in the code identify the specific repair in the list (i.e. 104 - the 04 indicate the first repair - timing adj - in the HC list, 201 - the 01 indicates the first repair - air filter - in the CO list). The last and final number in the code indicates the specific repair action (1 = UD, 2 = RR, 3 = AJ, 4 = NR, 5 = OK, e.g. 1045 = timing ok, 2012 = air filter replaced).

Code:



Specific Codes:

Code	HC List	Code	CO List
101-	points	201-	air filter
102-	condensor	202-	choke free movement
103-	spark dwell adjustment	203-	PCV valve
104-	spark timing adjustment	204-	PCV filter
105-	vacuum hoses, fittings, and routings	205-	exhaust gas oxygen sensor
		206-	idle speed adjustment
106-	spark plugs	207-	idle air/fuel mixture adjustment
107-	ignition wires		
108-	distributor caps	208-	air pump belt
109-	distributor rotor		

Table 5

EMISSION TEST STANDARDS

Standard Category	--- Emission Standard*--- HC (PPM)	CO (%)	--- MY Application --- LDV	LDT1	LDT2
1	1400	8.5	pre68	pre68	pre70
2	700	7.0	68-71	68-71	70-72
3	600	6.0	72-74	72-74	73-78
4	400	4.0	75-79	75-83	79-83
5	275	2.5	80	-	-
6	200	1.0	81+	84+	84+

* Stringency Factor = 35%

LDV = Light Duty Vehicle
LDT1 = Light Duty Truck w/GWV less than 6000 pounds.
LDT2 = Light Duty Truck with curb weight greater than 6000 pounds, or
Light Duty Truck w/GVW between 6000 pounds and 8500 pounds.

TEST REPORT / REPAIR REPORT / WAIVER APPLICATION FORM

SERIAL NUMBER _____

VEHICLE DESCRIPTION

LICENSE PLATE: _____
VIN: _____
MODEL YEAR: _____
VEHICLE MAKE: _____
VEHICLE MODEL: _____
ENGINE EMISSION FAMILY: (FROM EMISSION LABEL) _____
ODOMETER: _____

NEW CAR EMISSION PERFORMANCE WARRANTY

	YES	NO
VEHICLE MODEL YEAR LESS THAN OR EQUAL TO 5 YEARS OLD?	___	___
VEHICLE MILEAGE LESS THAN OR EQUAL TO 50,000 MILES?	___	___

STANDARD SELECTION

VEHICLE MODEL YEAR: _____
VEHICLE TYPE: LDV_____ LDT_____ HDG_____
EMISSION CATEGORY SELECTED: _____
EMISSION STANDARDS: HC_____ PPM
CO_____ %

INITIAL TEST

TEST CODE ____
TEST RESULTS:
PASS ____
FAIL CO ____
FAIL HC ____

DATE: _____ TEST FACILITY I.D.: _____ FACILITY INSPECTION TEST NO: _____ TEST LANE: _____

DATA: MODE	MEASUREMENT	STANDARD	Pass/Fail	MODE	MEASUREMENT	STANDARD	Pass/Fail
2500 RPM	HC _____ PPM	_____ PPM	_____	IDLE	HC _____ PPM	_____ PPM	_____
	CO _____ %	_____ %	_____		CO _____ %	_____ %	_____

RETEST 1

TEST CODE ____
TEST RESULTS:
PASS ____
FAIL CO ____
FAIL HC ____

DATE: _____ TEST FACILITY I.D.: _____ FACILITY INSPECTION TEST NO: _____ TEST LANE: _____

DATA: MODE	MEASUREMENT	STANDARD	Pass/Fail	MODE	MEASUREMENT	STANDARD	Pass/Fail
2500 RPM	HC _____ PPM	_____ PPM	_____	IDLE	HC _____ PPM	_____ PPM	_____
	CO _____ %	_____ %	_____		CO _____ %	_____ %	_____

RETEST 2

TEST CODE ____
TEST RESULTS:
PASS ____
FAIL CO ____
FAIL HC ____

DATE: _____ TEST FACILITY I.D.: _____ FACILITY INSPECTION TEST NO: _____ TEST LANE: _____

DATA: MODE	MEASUREMENT	STANDARD	Pass/Fail	MODE	MEASUREMENT	STANDARD	Pass/Fail
2500 RPM	HC _____ PPM	_____ PPM	_____	IDLE	HC _____ PPM	_____ PPM	_____
	CO _____ %	_____ %	_____		CO _____ %	_____ %	_____

DIAGNOSIS/REPAIRS FOR VEHICLES FAILING HC

REPAIR ITEM:	-UD-	-RR-	-AJ-	-NR-	-OK-	PART COST
POINTS	___	___	___	___	___	___.__
CONDENSOR	___	___	___	___	___	___.__
SPARK DWELL ADJ.	___	___	___	___	___	XX.XX
SPARK TIMING ADJ.	XXXX	XXXX	___	XXXX	___	XX.XX
VACUUM HOSES, FITTINGS & ROUTINGS	___	___	___	___	___	___.__
SPARK PLUGS	___	___	___	___	___	___.__
IGNITION WIRES	___	___	XXXX	___	___	___.__
DISTRIBUTOR CAP	___	___	XXXX	___	___	___.__
DISTRIBUTOR ROTOR	___	___	XXXX	___	___	___.__
TOTAL HC COST						___.__

DIAGNOSIS/REPAIRS FOR VEHICLES FAILING CO

REPAIR ITEM:	-UD-	-RR-	-AJ-	-NR-	-OK-	PART COST
AIR FILTER	___	___	XXXX	___	___	___.__
CHOKE FREE MOVEMENT	___	___	___	___	___	___.__
PCV VALVE	___	___	XXXX	___	___	___.__
PCV FILTER	___	___	XXXX	___	___	___.__
EXHAUST GAS, FITTINGS OXYGEN SENSOR	___	___	XXXX	___	___	___.__
IDLE SPEED ADJ.	___	XXXX	___	___	___	XX.XX
IDEL AIR/FUEL MIXTURE ADJ.	XXX	XXX	___	XXX	___	XX.XX
AIR PUMP BELT	___	___	___	___	___	___.__
TOTAL CO COST						___.__

OTHER EMISSION RELATED MALFUNCTIONS:

POSSIBLE MALFUNCTIONS (EGR, CARB FLOAT, THERMOSTATIC VACUUM VALVES, AIR CLEANER, HOT AIR SYSTEM, ENGINE COMPRESSION, ETC.)
OTHER ITEMS DIAGNOSED OR REPAIRED: _____

PARTS COST: $_____

WAIVER: TO BE COMPLETED BY CERTIFIED MECHANIC

PARTS COST ALLOWED FROM PREVIOUS REPAIR ATTEMPTS BY MOTORIST OR NON-CERTIFIED MECHANIC

$_____

CERTIFIED MECHANIC'S COSTS FOR ABOVE DIAGNOSIS/REPAIRS

PARTS: ___.__
LABOR: ___.__
PREVIOUS REPAIR PARTS: ___.__
TOTAL WAIVER COST: ___.__

TIMING OK _____ IDLE A/F OK _____

CERTIFIED _____
REPAIR MECHANIC'S SIGNATURE DATE

REPAIR SERVICE CENTER I.D. No. _____

SEE REVERSE SIDE FOR ABBREVIATIONS

Symbols for Table 6

AJ - Component or Part is "ADJUSTED" such that the item is now in proper operating condition.

NR - "Needs Repair" indicates that the item has been inspected and found not to be in proper operating condition, however the total cost of repairs has exceeded the appropriate cost limit.

OK - "OK" indicates that the item has been inspected and found to be in proper operating condition, or the item is not applicable to the vehicle.

RR - "Repaired or Replaced" indicates that the item has been repaired or replaced such that the item is now in proper operating condition.

UD - "Undiagnosed" indicates that the item was not checked prior to exceeding the cost limit.

APPENDIX A

OFFICIAL VEHICLE EMISSIONS INSPECTION PROGRAM

SMOGVILLE REVISED STATUTES, SECTIONS 98-1700 THROUGH 98-1775

APPENDIX B

MOTOR VEHICLE REGISTRATION

SMOGVILLE REVISED STATUTES, SECTIONS 87-1600 THROUGH 87-1620

APPENDIX C

MOTOR VEHICLE SAFETY INSPECTION

HOUSE BILL 2319, FORTY-FOURTH LEGISLATURE, SECOND SESSION

APPENDIX D

UNIFORM ACT REGULATING TRAFFIC ON THE HIGHWAYS

SMOGVILLE REVISED STATUTES, SECTIONS 87-1630 THROUGH 87-1695

APPENDIX E

PERFORMANCE CRITERIA FOR CARBON MONOXIDE AND

HYDROCARBON INSPECTION INSTRUMENTS

See EPA Reports:

Title	Number
Analysis of the Emission Inspection Analyzer	EPA-AA-IMS-80-5-A
Recommended Specifications for Emission Inspection Analyzers	EPA-AA-IMS-80-5-B

APPENDIX F

PROCEDURES FOR DYNAMOMETER ROAD HORSEPOWER CALIBRATION

APPENDIX G

VEHICLE INSPECTION SPECIALIST SPECIFICATIONS